

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

1 Identification

- **Product identifier**
- **Trade name:** DIAMOND AEROSOL SPRAY
- **Article number:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: info@emsdiasum.com
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

STOT SE 1 H370 Causes damage to organs.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 1)

· **Hazard pictograms**

GHS02 GHS06 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:***Ethyl Alcohol, Absolute, 200 Proof**Reagent, ACS (Ethanol)**15055**Petroleum gases, liquefied, sweetened**Methyl Alcohol**propan-2-ol*· **Hazard statements***Highly flammable liquid and vapor.**Toxic if swallowed, in contact with skin or if inhaled.**Causes serious eye irritation.**May cause genetic defects.**May cause cancer.**Causes damage to organs.*· **Precautionary statements***Keep away from heat/sparks/open flames/hot surfaces. No smoking.**Use explosion-proof electrical/ventilating/lighting/equipment.**Do not breathe dust/fume/gas/mist/vapors/spray.**Wear protective gloves / eye protection / face protection.**Wear protective gloves / protective clothing.**Ground/bond container and receiving equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Specific treatment (see on this label).**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**Call a POISON CENTER/doctor if you feel unwell.**IF exposed or concerned: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Rinse mouth.**In case of fire: Use for extinction: CO2, powder or water spray.**Take off immediately all contaminated clothing and wash it before reuse.**Store locked up.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 2)

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	25-50%
68476-86-8	Petroleum gases, liquefied, sweetened	25-50%
67-63-0	propan-2-ol	10-25%
67-56-1	Methyl Alcohol	≤ 2,5%
108-10-1	4-methylpentan-2-one	≤ 2,5%
7782-40-3	diamond natural monocrystalline powder	≤ 2,5%

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; immediately call for medical help.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 3)

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

US

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 4)

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

64-17-5 Ethyl Alcohol, Absolute, 200 Proof
Reagent, ACS (Ethanol)
15055

PEL Long-term value: 1900 mg/m³, 1000 ppm

REL Long-term value: 1900 mg/m³, 1000 ppm

TLV Short-term value: 1880 mg/m³, 1000 ppm

67-63-0 propan-2-ol

PEL Long-term value: 980 mg/m³, 400 ppm

REL Short-term value: 1225 mg/m³, 500 ppm

Long-term value: 980 mg/m³, 400 ppm

TLV Short-term value: 984 mg/m³, 400 ppm

Long-term value: 492 mg/m³, 200 ppm

BEI

67-56-1 Methyl Alcohol

PEL Long-term value: 260 mg/m³, 200 ppm

REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

TLV Short-term value: 328 mg/m³, 250 ppm

Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

108-10-1 4-methylpentan-2-one

PEL Long-term value: 410 mg/m³, 100 ppm

REL Short-term value: 300 mg/m³, 75 ppm

Long-term value: 205 mg/m³, 50 ppm

TLV Short-term value: 307 mg/m³, 75 ppm

Long-term value: 82 mg/m³, 20 ppm

BEI

· **Ingredients with biological limit values:**

67-63-0 propan-2-ol

BEI 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

67-56-1 Methyl Alcohol

BEI 15 mg/L

Medium: urine

Time: end of shift

Parameter: Methanol (background, nonspecific)

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 5)

108-10-1 4-methylpentan-2-one

BEI 1 mg/L
 Medium: urine
 Time: end of shift
 Parameter: MIBK

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Aerosol

Color: According to product specification

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 6)

· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	77 °C (171 °F)
· Flash point:	-88 °C (-126 °F)
· Flammability (solid, gaseous):	Not flammable.
· Ignition temperature:	425 °C (797 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.0 Vol %
Upper:	15.0 Vol %
· Vapor pressure at 20 °C (68 °F):	59 hPa (44 mm Hg)
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	64.0 %
VOC content:	64.0 %
	640.0 g/l / 5.34 lb/gl
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

US

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 7)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic

Irritant

Carcinogenic.

The product can cause inheritable damage.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	1
67-63-0	propan-2-ol	3
108-10-1	4-methylpentan-2-one	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**



(Contd. of page 8)

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA | UN1992 |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, IATA · ADR · IMDG | Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)
1992 Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)
FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL)) |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT |  |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids
3 |
| <ul style="list-style-type: none"> · ADR, IMDG, IATA |  |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids
3 |
| <ul style="list-style-type: none"> · Packing group · DOT, ADR, IMDG, IATA | II |
| <ul style="list-style-type: none"> · Environmental hazards: | Not applicable. |
| <ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code | Warning: Flammable liquids
33
F-E,S-D
B
SW2 Clear of living quarters. |

(Contd. on page 10)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 9)

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1992 FLAMMABLE LIQUIDS, TOXIC, N.O.S. (PETROLEUM GASES, LIQUEFIED, SWEETENED, ETHANOL), 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

67-63-0 propan-2-ol

67-56-1 Methyl Alcohol

108-10-1 4-methylpentan-2-one

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

108-10-1 4-methylpentan-2-one

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

64-17-5 Ethyl Alcohol, Absolute, 200 Proof
Reagent, ACS (Ethanol)
15055

67-56-1 Methyl Alcohol

108-10-1 4-methylpentan-2-one

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 10)

· Carcinogenic categories
· EPA (Environmental Protection Agency)

108-10-1	4-methylpentan-2-one	I
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· TLV (Threshold Limit Value established by ACGIH)

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	A3
67-63-0	propan-2-ol	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms

· Signal word *Danger*
· Hazard-determining components of labeling:

Ethyl Alcohol, Absolute, 200 Proof
Reagent, ACS (Ethanol)
15055
Petroleum gases, liquefied, sweetened
Methyl Alcohol
propan-2-ol

· Hazard statements

Highly flammable liquid and vapor.
Toxic if swallowed, in contact with skin or if inhaled.
Causes serious eye irritation.
May cause genetic defects.
May cause cancer.
Causes damage to organs.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves / eye protection / face protection.
Wear protective gloves / protective clothing.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

(Contd. on page 12)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 11)

Specific treatment (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

In case of fire: Use for extinction: CO₂, powder or water spray.

Take off immediately all contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 12/29/2015 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

*OSHA: Occupational Safety **Health***

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 3: Acute toxicity, Hazard Category 3

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Muta. 1B: Germ cell mutagenicity, Hazard Category 1B

Carc. 1A: Carcinogenicity, Hazard Category 1A

STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** DIAMOND AEROSOL SPRAY
- **Article number:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Muta. 1B H340 May cause genetic defects.

(Contd. on page 2)

AU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 1)

Carc. 1A H350 May cause cancer.

STOT SE 1 H370 Causes damage to organs.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

· **Label elements**· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).· **Hazard pictograms**

GHS02

GHS06

GHS07

GHS08

· **Signal word** Danger· **Hazard-determining components of labelling:**

Ethyl Alcohol, Absolute, 200 Proof

Reagent, ACS (Ethanol)

15055

Petroleum gases, liquefied, sweetened

Methyl Alcohol

propan-2-ol

· **Hazard statements**

Highly flammable liquid and vapour.

Toxic if swallowed, in contact with skin or if inhaled.

Causes serious eye irritation.

May cause genetic defects.

May cause cancer.

Causes damage to organs.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear protective gloves / eye protection / face protection.

Wear protective gloves / protective clothing.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 2)

- IF exposed or concerned: Get medical advice/attention.*
If eye irritation persists: Get medical advice/attention.
 Rinse mouth.
In case of fire: Use for extinction: CO2, powder or water spray.
Take off immediately all contaminated clothing and wash it before reuse.
 Store locked up.
 Store in a well-ventilated place. Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	25-50%
68476-86-8	Petroleum gases, liquefied, sweetened	25-50%
67-63-0	propan-2-ol	10-25%
67-56-1	Methyl Alcohol	≤ 2,5%
108-10-1	4-methylpentan-2-one	≤ 2,5%
7782-40-3	diamond natural monocrystalline powder	≤ 2,5%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** *Do not induce vomiting; call for medical help immediately.*
- **Information for doctor:**
 - **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

AU

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 3)

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 4)

· **Control parameters**· **Ingredients with limit values that require monitoring at the workplace:**

64-17-5 Ethyl Alcohol, Absolute, 200 Proof
Reagent, ACS (Ethanol)
15055

NES Long-term value: 1880 mg/m³, 1000 ppm

67-63-0 propan-2-ol

NES Short-term value: 1230 mg/m³, 500 ppm
Long-term value: 983 mg/m³, 400 ppm

67-56-1 Methyl Alcohol

NES Short-term value: 328 mg/m³, 250 ppm
Long-term value: 262 mg/m³, 200 ppm
Sk

108-10-1 4-methylpentan-2-one

NES Short-term value: 307 mg/m³, 75 ppm
Long-term value: 205 mg/m³, 50 ppm

· **Additional information:** The lists valid during the making were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 5)

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Aerosol
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	77 °C

· **Flash point:** -88 °C· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:** 425 °C· **Decomposition temperature:** Not determined.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.· **Explosion limits:**

· Lower:	2.0 Vol %
· Upper:	15.0 Vol %

· **Vapour pressure at 20 °C:** 59 hPa· **Density:** Not determined.· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· Organic solvents:	64.0 %
· VOC (EC)	64.00 %

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 6)

· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Irritant
Carcinogenic.
The product can cause inheritable damage.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Muta. 1B, Carc. 1A

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**


(Contd. of page 7)

- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number · ADG, IMDG, IATA	UN1992
· UN proper shipping name · ADG · IMDG · IATA	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL)) Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)
· Transport hazard class(es) · ADG, IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· Packing group · ADG, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids. 33 F-E,S-D B SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG · Limited quantities (LQ)	1L

(Contd. on page 9)

AU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 8)

· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
<hr/>	
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (PETROLEUM GASES, LIQUEFIED, SWEETENED, ETHANOL (ETHYL ALCOHOL)), 3, II

15 Regulatory information· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Australian Inventory of Chemical Substances**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055
68476-86-8	Petroleum gases, liquefied, sweetened
67-63-0	propan-2-ol
67-56-1	Methyl Alcohol
108-10-1	4-methylpentan-2-one

· **Standard for the Uniform Scheduling of Medicines and Poisons**

67-56-1	Methyl Alcohol	S5, S6
108-10-1	4-methylpentan-2-one	S5

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).· **Hazard pictograms**

GHS02 GHS06 GHS07 GHS08

· **Signal word** Danger· **Hazard-determining components of labelling:**

Ethyl Alcohol, Absolute, 200 Proof

Reagent, ACS (Ethanol)

15055

Petroleum gases, liquefied, sweetened

Methyl Alcohol

propan-2-ol

· **Hazard statements**

Highly flammable liquid and vapour.

Toxic if swallowed, in contact with skin or if inhaled.

Causes serious eye irritation.

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 9)

*May cause genetic defects.**May cause cancer.**Causes damage to organs.***· Precautionary statements***Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**Use explosion-proof electrical/ventilating/lighting/equipment.**Do not breathe dust/fume/gas/mist/vapours/spray.**Wear protective gloves / eye protection / face protection.**Wear protective gloves / protective clothing.**Ground/bond container and receiving equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Specific treatment (see on this label).**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**Call a POISON CENTER/doctor if you feel unwell.**IF exposed or concerned: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Rinse mouth.**In case of fire: Use for extinction: CO2, powder or water spray.**Take off immediately all contaminated clothing and wash it before reuse.**Store locked up.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Directive 2012/18/EU****· Named dangerous substances - ANNEX I Methyl Alcohol****· Seveso category***H2 ACUTE TOXIC**P5c FLAMMABLE LIQUIDS***· Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t****· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t****· National regulations:****· Information about limitation of use:***Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.**Exceptions can be made by the authorities in certain cases.***· Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 10)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 3: Acute toxicity, Hazard Category 3

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Muta. 1B: Germ cell mutagenicity, Hazard Category 1B

Carc. 1A: Carcinogenicity, Hazard Category 1A

STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1

AU

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

1 Identification

- **Product identifier**
- **Trade name:** DIAMOND AEROSOL SPRAY
- **Article number:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: info@emsdiasum.com
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2 H225 Highly flammable liquid and vapour.



GHS08 Health hazard

Germ Cell Mutagenicity - Category 1B H340 May cause genetic defects.

Carcinogenicity - Category 1A H350 May cause cancer.



GHS07

Eye Irritation - Category 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
 Ethyl Alcohol, Absolute, 200 Proof
 Reagent, ACS (Ethanol)
 15055
 Petroleum gases, liquefied, sweetened

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 1)

4-methylpentan-2-one

· **Hazard statements**

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause genetic defects.

May cause cancer.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Wear protective gloves/protective clothing/eye protection/face protection.

Ground and bond container and receiving equipment.

Keep container tightly closed.

Use non-sparking tools.

Take actions to prevent static discharges.

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store locked up.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**

· **WHMIS-symbols:**

B2 - Flammable liquid

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *4

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

CA

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 2)

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	30-60% w/w
67-63-0	propan-2-ol	10-30% w/w
67-56-1	Methyl Alcohol	1-5% w/w
108-10-1	4-methylpentan-2-one	1-5% w/w

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

(Contd. on page 4)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 3)

- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

64-17-5 Ethyl Alcohol, Absolute, 200 Proof
Reagent, ACS (Ethanol)
15055

EL Short-term value: 1000 ppm

EV Long-term value: 1,900 mg/m³, 1,000 ppm

67-63-0 propan-2-ol

EL Short-term value: 400 ppm

Long-term value: 200 ppm

EV Short-term value: 400 ppm

Long-term value: 200 ppm

67-56-1 Methyl Alcohol

EL Short-term value: 250 ppm

Long-term value: 200 ppm

Skin

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 4)

EV	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
108-10-1 4-methylpentan-2-one	
EL	Short-term value: 75 ppm Long-term value: 20 ppm IARC 2B
EV	Short-term value: 75 ppm Long-term value: 205 mg/m ³ , 50 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Aerosol

(Contd. on page 6)

-CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 5)

Color:	According to product specification
· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	77 °C
· Flash point:	-88 °C
· Flammability (solid, gaseous):	Not flammable.
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.0 Vol %
Upper:	15.0 Vol %
· Vapor pressure at 20 °C:	59 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	64.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

CA

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 6)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic

Irritant

Carcinogenic.

The product can cause inheritable damage.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	1
67-63-0	propan-2-ol	3
108-10-1	4-methylpentan-2-one	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

(Contd. on page 8)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY



(Contd. of page 7)

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|--|
| · UN-Number | UN1992 |
| · DOT, TDG, IMDG, IATA | UN1992 |
| · UN proper shipping name | Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol) |
| · DOT, IATA | 1992 Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol) |
| · TDG | 1992 Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol) |
| · IMDG | FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL)) |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · TDG, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, TDG, IMDG, IATA | II |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Flammable liquids |
| · Danger code (Kemler): | 33 |
| · EMS Number: | F-E,S-D |
| · Stowage Category | B |
| · Stowage Code | SW2 Clear of living quarters. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

(Contd. on page 9)

-CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 8)

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· **TDG**

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1992 FLAMMABLE LIQUIDS, TOXIC, N.O.S. (PETROLEUM GASES, LIQUEFIED, SWEETENED, ETHANOL), 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 propan-2-ol

67-56-1 Methyl Alcohol

108-10-1 4-methylpentan-2-one

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

108-10-1 4-methylpentan-2-one

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 Ethyl Alcohol, Absolute, 200 Proof
Reagent, ACS (Ethanol)
15055

67-56-1 Methyl Alcohol

108-10-1 4-methylpentan-2-one

(Contd. on page 10)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 9)

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

108-10-1	4-methylpentan-2-one	I
----------	----------------------	---

· **TLV (Threshold Limit Value established by ACGIH)**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	A3
67-63-0	propan-2-ol	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055
---------	---

· **Canadian Ingredient Disclosure list (limit 1%)**

67-63-0	propan-2-ol
67-56-1	Methyl Alcohol
108-10-1	4-methylpentan-2-one

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Ethyl Alcohol, Absolute, 200 Proof

Reagent, ACS (Ethanol)

15055

Petroleum gases, liquefied, sweetened

4-methylpentan-2-one

· **Hazard statements**

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause genetic defects.

May cause cancer.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Wear protective gloves/protective clothing/eye protection/face protection.

Ground and bond container and receiving equipment.

Keep container tightly closed.

Use non-sparking tools.

Take actions to prevent static discharges.

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2015

Reviewed on 12/29/2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 10)

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

Store locked up.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 12/29/2015 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

*OSHA: Occupational Safety **Health***

Flammable Liquids - Category 2: Flammable liquids, Hazard Category 2

Eye Irritation - Category 2A: Serious eye damage/eye irritation, Hazard Category 2A

Germ Cell Mutagenicity - Category 1B: Germ cell mutagenicity, Hazard Category 1B

Carcinogenicity - Category 1A: Carcinogenicity, Hazard Category 1A

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** DIAMOND AEROSOL SPRAY
- **Article number:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

STOT SE 1 H370 Causes damage to organs.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 1)

· Hazard pictograms

GHS02 GHS06 GHS08

· Signal word Danger**· Hazard-determining components of labelling:**

Petroleum gases, liquefied, sweetened

Methyl Alcohol

4-methylpentan-2-one

· Hazard statements

H225 Highly flammable liquid and vapour.

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H319 Causes serious eye irritation.

H340 May cause genetic defects.

H350 May cause cancer.

H370 Causes damage to organs.

· Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards**· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****· 3.2 Chemical characterisation: Mixtures****· Description:** Mixture of substances listed below with nonhazardous additions.**· Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055 ----- ☠ Flam. Liq. 2, H225	25-50%
CAS: 68476-86-8 EINECS: 270-705-8	Petroleum gases, liquefied, sweetened ☠ Flam. Gas 1, H220; Flam. Liq. 1, H224; ☠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas C, H280	25-50%
CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol ☠ Flam. Liq. 2, H225; ☠ Eye Irrit. 2, H319; STOT SE 3, H336	10-25%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 2)

CAS: 67-56-1 EINECS: 200-659-6	Methyl Alcohol ⚠ Flam. Liq. 2, H225; ⚠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≤ 2,5%
CAS: 108-10-1 EINECS: 203-550-1	4-methylpentan-2-one ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2,5%
CAS: 7782-40-3 EINECS: 231-953-2	diamond natural monocrystalline powder	≤ 2,5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· 5.2 **Special hazards arising from the substance or mixture** No further relevant information available.

· 5.3 Advice for firefighters

· **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· 6.2 **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 3)

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

64-17-5 Ethyl Alcohol, Absolute, 200 Proof
Reagent, ACS (Ethanol)
15055

WEL Long-term value: 1920 mg/m³, 1000 ppm

67-63-0 propan-2-ol

WEL Short-term value: 1250 mg/m³, 500 ppm
Long-term value: 999 mg/m³, 400 ppm

67-56-1 Methyl Alcohol

WEL Short-term value: 333 mg/m³, 250 ppm
Long-term value: 266 mg/m³, 200 ppm
Sk

108-10-1 4-methylpentan-2-one

WEL Short-term value: 416 mg/m³, 100 ppm
Long-term value: 208 mg/m³, 50 ppm
Sk, BMGV

· **Ingredients with biological limit values:**

108-10-1 4-methylpentan-2-one

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 4)

BMGV	20 µmol/L Medium: urine Sampling time: post shift Parameter: 4-methylpentan-2-one
------	--

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Aerosol

Colour: According to product specification

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 5)

· Change in condition Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	77 °C
· Flash point:	-88 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits: Lower:	2.0 Vol %
Upper:	15.0 Vol %
· Vapour pressure at 20 °C:	59 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity: Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content: Organic solvents:	64.0 %
VOC (EC)	64.00 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Toxic if swallowed, in contact with skin or if inhaled.

(Contd. on page 7)

-GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 6)

· **LD/LC50 values relevant for classification:****67-56-1 Methyl Alcohol**

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**
May cause genetic defects.
- **Carcinogenicity**
May cause cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
Causes damage to organs.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

GB

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31


Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 7)

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN1992
· 14.2 UN proper shipping name · ADR · IMDG · IATA	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL)) Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids. 33 F-E,S-D B SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (PETROLEUM GASES, LIQUEFIED, SWEETENED, ETHANOL (ETHYL ALCOHOL)), 3, II

GB

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: **DIAMOND AEROSOL SPRAY**

(Contd. of page 8)

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I Methyl Alcohol**
- **Seveso category**
H2 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H220 Extremely flammable gas.
H224 Extremely flammable liquid and vapour.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H370 Causes damage to organs.
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1: Flammable gases, Hazard Category 1
Press. Gas C: Gases under pressure: Compressed gas
Flam. Liq. 1: Flammable liquids, Hazard Category 1
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.12.2015

Revision: 29.12.2015

Trade name: DIAMOND AEROSOL SPRAY

(Contd. of page 9)

*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Muta. 1B: Germ cell mutagenicity, Hazard Category 1B**Carc. 1A: Carcinogenicity, Hazard Category 1A**STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** DIAMOND AEROSOL SPRAY
- **Artikelnummer:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Aurion**
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS02 vlam

Flam. Liq. 2 H225 Licht ontvlambare vloeistof en damp.



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 3 H301 Giftig bij inslikken.

Acute Tox. 3 H311 Giftig bij contact met de huid.

Acute Tox. 3 H331 Giftig bij inademing.



GHS08 gezondheidsgevaar

Muta. 1B H340 Kan genetische schade veroorzaken.

Carc. 1A H350 Kan kanker veroorzaken.

STOT SE 1 H370 Veroorzaakt schade aan organen.

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: **DIAMOND AEROSOL SPRAY**

(Vervolg van blz. 1)



GHS07

Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.

2.2 Etiketteringselementen

Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

Gevarenpictogrammen



GHS02

GHS06

GHS08

Signaalwoord Gevaar

Gevaaraanduidende componenten voor de etikettering:

aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt

methanol

4-methylpentaan-2-on

Gevarenaanduidingen

H225 Licht ontvlambare vloeistof en damp.

H301+H311+H331 Giftig bij inslikken, bij contact met de huid en bij inademing.

H319 Veroorzaakt ernstige oogirritatie.

H340 Kan genetische schade veroorzaken.

H350 Kan kanker veroorzaken.

H370 Veroorzaakt schade aan organen.

Veiligheidsaanbevelingen

P301+P310 NA INSLIKKEN: onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken.

Huid met water afspoelen/afdouchen.

P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P321 Specifieke behandeling vereist (zie op dit etiket).

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

2.3 Andere gevaren

Resultaten van PBT- en zPzB-beoordeling

PBT: Niet bruikbaar.

zPzB: Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

3.2 Chemische karakterisering: Mengsels

Beschrijving: Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

Gevaarlijke inhoudstoffen:

CAS: 64-17-5	ethanol	25-50%
EINECS: 200-578-6	Flam. Liq. 2, H225	

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 2)

CAS: 68476-86-8 EINECS: 270-705-8	aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt ⚠ Flam. Gas 1, H220; Flam. Liq. 1, H224; ⚠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas C, H280	25-50%
CAS: 67-63-0 EINECS: 200-661-7	2-propanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 67-56-1 EINECS: 200-659-6	methanol ⚠ Flam. Liq. 2, H225; ⚠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≤ 2,5%
CAS: 108-10-1 EINECS: 203-550-1	4-methylpentaan-2-on ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; ⚠ Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2,5%
CAS: 7782-40-3 EINECS: 231-953-2	diamond natural monocrystalline powder	≤ 2,5%

· Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

RUBRIEK 4: Eerstehulpmaatregelen**· 4.1 Beschrijving van de eerstehulpmaatregelen****· Algemene informatie:**

Verontreinigde kleding onmiddellijk uittrekken.

Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.

Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.

· Na het inademen:

Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.**· Na oogcontact:**

De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.

· Na inslikken: Geen braken teweegbrengen en onmiddellijk medische hulp raadplegen.**· 4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.**· 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen**· 5.1 Blusmiddelen****· Geschikte blusmiddelen:** CO₂, zand, bluspoeder. Geen water gebruiken.**· Blusmiddelen die uit veiligheidsoogpunt niet geschikt zijn:** Krachtige waterstraal**· 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**

Geen verdere relevante informatie verkrijgbaar.

· 5.3 Advies voor brandweerlieden**· Speciale beschermende kleding:** Ademhalingstoestel aantrekken.**RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel****· 6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures**

Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

· 6.2 Milieuvoorzorgsmaatregelen: Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 3)

- **6.3 Insluitings- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
Besmet materiaal zoals afval volgens punt 13 verwijderen.
Voor voldoende ventilatie zorgen.
Niet met water of waterachtige reinigingsmiddelen wegspoelen.
- **6.4 Verwijzing naar andere rubrieken**
Informatie inzake veilig gebruik - zie hoofdstuk 7.
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.
Tanks voorzichtig openen en behandelen.
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:**
Onststekingsbronnen op afstand houden - niet roken.
Beschermen tegen hitte.
Maatregelen treffen tegen ontlading van statische elektriciteit.
Ademhalingsstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Op een koele plaats bewaren.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:**
Tanks ondoordringbaar gesloten houden.
Koel en droog bewaren in goed gesloten vaten.
Tegen hitte en directe zonnestrallen beschermen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.

- **8.1 Controleparameters**

- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

64-17-5 ethanol

WGW	Korte termijn waarde: 1900 mg/m ³ , 990 ppm
	Lange termijn waarde: 260 mg/m ³ , 35 ppm

67-56-1 methanol

WGW	Lange termijn waarde: 133 mg/m ³ , 100 ppm
-----	---

108-10-1 4-methylpentaan-2-on

WGW	Korte termijn waarde: 208 mg/m ³ , 50 ppm
	Lange termijn waarde: 104 mg/m ³ , 25 ppm

- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 4)

- Verontreinigde kleding onmiddellijk uittrekken.
- Vóór de pauze en aan het einde van werktijd handen wassen.
- Beschermende kleding afzonderlijk bewaren.
- Aanraking met de ogen vermijden.
- Aanraking met de ogen en de huid vermijden.

- **Ademhalingsbescherming:**

Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.

- **Handbescherming:**



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding. Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliën-mengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

- **Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

- **Doordringingstijd van het handschoenmateriaal**

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

- **Oogbescherming:**



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**

- **Algemene gegevens**

- **Voorkomen:**

Vorm:	Aërosol
Kleur:	Volgens de produktbeschrijving
Reuk:	Karakteristiek
Geurdrempelwaarde:	Niet bepaald.

- **pH-waarde:** Niet bepaald.

- **Toestandsverandering**

Smeltpunt/smeltbereik:	Niet bepaald.
Kookpunt/kookpuntbereik:	77 °C

- **Vlampunt:** -88 °C

- **Ontvlambaarheid (vast, gasvormig):** Niet bruikbaar.

- **Ontstekingstemperatuur:** 425 °C

- **Ontbindingstemperatuur:** Niet bepaald.

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 5)

· Zelfonsteking:	Het produkt ontbrandt niet uit zichzelf.
· Ontploffingsgevaar:	Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.
· Ontploffingsgrenzen:	
Onderste:	2.0 Vol %
Bovenste:	15.0 Vol %
· Dampspanning bij 20 °C:	59 hPa
· Dichtheid:	Niet bepaald.
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingsnelheid	Niet bepaald.
· Oplosbaarheid in/mengbaarheid met Water:	Niet resp. gering mengbaar.
· Verdelingscoëfficiënt (n-octanol/water):	Niet bepaald.
· Viscositeit	
Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.
· Oplosmiddelgehalte:	
Organisch oplosmiddel:	64.0 %
VOC (EG)	64,00 %
· 9.2 Overige informatie	Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit**
Gifstig bij inslikken, bij contact met de huid en bij inademing.

· Indelingsrelevantie LD/LC50-waarden:

67-56-1 methanol

Oraal	LD50	5628 mg/kg (rat)
Dermaal	LD50	15800 mg/kg (rabbit)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstige oogirritatie.

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 6)

- **Sensibilisatie van de luchtwegen/de huid**
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen**
Kan genetische schade veroorzaken.
- **Kankerverwekkendheid**
Kan kanker veroorzaken.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling**
Veroorzaakt schade aan organen.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL) 2: Kan erfelijke genetische schade veroorzaken.
Gevaar voor water klasse 3 (D) (Zelfclassificatie): gevaar voor water groot
Niet lozen in grondwater, oppervlaktewater of riolering, ook niet in kleine hoeveelheden.
Gevaar voor drinkwater zelfs bij het uitlopen van zeer geringe hoeveelheden in de ondergrond.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR, IMDG, IATA** UNI992
- **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
- **ADR** 1992 BRANDBARE VLOEISTOF, GIFTIG, N.E.G.
(aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt,
ETHANOL (ETHYLALCOHOL))
- **IMDG** FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases,
liquefied, sweetened, ETHANOL (ETHYL ALCOHOL))

(Vervolg op blz. 8)

Veiligheidsinformatieblad


volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 7)

· IATA	Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)
· 14.3 Transportgevarenklasse(n) · ADR, IMDG, IATA	
	
· klasse · Etiket	3 Brandbare vloeistoffen 3
· 14.4 Verpakkingsgroep: · ADR, IMDG, IATA	II
· 14.5 Milieugevaren:	Niet bruikbaar.
· 14.6 Bijzondere voorzorgen voor de gebruiker · Kemler-getal: · EMS-nummer: · Stowage Category · Stowage Code	Waarschuwing: Brandbare vloeistoffen 33 F-E,S-D B SW2 Clear of living quarters.
· 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code	Niet bruikbaar.
· Transport/verdere gegevens:	
· ADR · Beperkte hoeveelheden (LQ) · Uitzonderde hoeveelheden (EQ)	1L Code: E2 Grootste netto hoeveelheid per binnenverpakking: 30 ml Grootste netto hoeveelheid per buitenverpakking: 500 ml
· Vervoerscategorie · Tunnelbeperkingscode	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· VN "Model Regulation":	UN 1992 BRANDBARE VLOEISTOF, GIFTIG, N.E.G. (AARDOLIEGASSEN, VLOEIBAAR GEMAAKT, STANKVRIJ GEMAAKT, ETHANOL (ETHYLALCOHOL)), 3, II

RUBRIEK 15: Regelgeving

· 15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel

· SZW-lijst van kankerverwekkende stoffen	
64-17-5	ethanol
68476-86-8	aardoliegasen, vloeibaar gemaakt, stankvrij gemaakt
· SZW-lijst van mutagene stoffen	
68476-86-8	aardoliegasen, vloeibaar gemaakt, stankvrij gemaakt

(Vervolg op blz. 9)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 8)

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid		
64-17-5	ethanol	I
· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling		
64-17-5	ethanol	I
67-56-1	methanol	2
· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding		
64-17-5	ethanol	x

· **Richtlijn 2012/18/EU**

· **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I methanol**

· **Seveso-categorie**

H2 ACUUT TOXISCH

P5c ONTVLAMBARE VLOEISTOFFEN

· **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 50 t**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 200 t**

· **Nationale voorschriften:**

· **Aanwijzingen m.b.t. tewerkstellingsbeperking:**

Werknemers mogen aan de kankerverwekkende gevaarlijke stoffen van deze toebereiding niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.

· **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 2: Saneringsinspanning A

· **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

· **Relevante zinnen**

H220 Zeer licht ontvlambaar gas.

H224 Zeer licht ontvlambare vloeistof en damp.

H225 Licht ontvlambare vloeistof en damp.

H280 Bevat gas onder druk; kan ontploffen bij verwarming.

H302 Schadelijk bij inslikken.

H312 Schadelijk bij contact met de huid.

H315 Veroorzaakt huidirritatie.

H319 Veroorzaakt ernstige oogirritatie.

H332 Schadelijk bij inademing.

H335 Kan irritatie van de luchtwegen veroorzaken.

H336 Kan slaperigheid of duizeligheid veroorzaken.

H340 Kan genetische schade veroorzaken.

H350 Kan kanker veroorzaken.

H370 Veroorzaakt schade aan organen.

· **Afkortingen en acroniemen:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

(Vervolg op blz. 10)

Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31

datum van de druk: 29.12.2015

Herziening van: 29.12.2015

Handelsnaam: DIAMOND AEROSOL SPRAY

(Vervolg van blz. 9)

PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1: Flammable gases, Hazard Category 1
Press. Gas C: Gases under pressure: Compressed gas
Flam. Liq. 1: Flammable liquids, Hazard Category 1
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
Carc. 1A: Carcinogenicity, Hazard Category 1A
STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

NL

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** DIAMOND AEROSOL SPRAY
- **Code du produit:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS02 flamme

Flam. Liq. 2 H225 Liquide et vapeurs très inflammables.



GHS06 tête de mort sur deux tibias

Acute Tox. 3 H301 Toxique en cas d'ingestion.

Acute Tox. 3 H311 Toxique par contact cutané.

Acute Tox. 3 H331 Toxique par inhalation.



GHS08 danger pour la santé

Muta. 1B H340 Peut induire des anomalies génétiques.

Carc. 1A H350 Peut provoquer le cancer.

STOT SE 1 H370 Risque avéré d'effets graves pour les organes.



GHS07

Eye Irrit. 2 H319 Provoque une sévère irritation des yeux.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: DIAMOND AEROSOL SPRAY

(suite de la page 1)

Pictogrammes de danger


GHS02 GHS06 GHS08

Mention d'avertissement Danger
Composants dangereux déterminants pour l'étiquetage:

gaz de pétrole liquéfiés adoucis

méthanol

4-méthylpentane-2-one

Mentions de danger

H225 Liquide et vapeurs très inflammables.

H301+H311+H331 Toxique par ingestion, par contact cutané ou par inhalation.

H319 Provoque une sévère irritation des yeux.

H340 Peut induire des anomalies génétiques.

H350 Peut provoquer le cancer.

H370 Risque avéré d'effets graves pour les organes.

Conseils de prudence

P301+P310 EN CAS D'INGESTION: Appeler immédiatement un CENTRE ANTIPOISON/un médecin.

P303+P361+P353 EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau/Se doucher.

P305+P351+P338 EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

P321 Traitement spécifique (voir sur cette étiquette).

P405 Garder sous clef.

P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

2.3 Autres dangers
Résultats des évaluations PBT et vPvB
PBT: Non applicable.

vPvB: Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

3.2 Caractérisation chimique: Mélanges
Description: Mélange des substances mentionnées à la suite avec des additifs non dangereux.

Composants dangereux:

CAS: 64-17-5 EINECS: 200-578-6	éthanol Flam. Liq. 2, H225	25-50%
CAS: 68476-86-8 EINECS: 270-705-8	gaz de pétrole liquéfiés adoucis Flam. Gas 1, H220; Flam. Liq. 1, H224; Muta. 1B, H340; Carc. 1A, H350; Press. Gas C, H280	25-50%
CAS: 67-63-0 EINECS: 200-661-7	propane-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	10-25%

(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: DIAMOND AEROSOL SPRAY

(suite de la page 2)

CAS: 67-56-1 EINECS: 200-659-6	méthanol 	≤ 2,5%
CAS: 108-10-1 EINECS: 203-550-1	4-méthylpentane-2-one 	≤ 2,5%
CAS: 7782-40-3 EINECS: 231-953-2	diamond natural monocrystalline powder	≤ 2,5%

· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

RUBRIQUE 4: Premiers secours

· 4.1 Description des premiers secours

· Remarques générales:

Enlever immédiatement les vêtements contaminés par le produit.

Ne retirer la protection respiratoire qu'après avoir retiré les vêtements contaminés.

Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.

· Après inhalation:

Donner de l'air frais ou de l'oxygène; demander d'urgence une assistance médicale.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· Après contact avec la peau: Laver immédiatement à l'eau et au savon et bien rincer.

· Après contact avec les yeux:

Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, consulter un médecin.

· Après ingestion: Ne pas faire vomir, demander d'urgence une assistance médicale.

· 4.2 Principaux symptômes et effets, aigus et différés Pas d'autres informations importantes disponibles.

· 4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· 5.1 Moyens d'extinction

· **Moyens d'extinction:** CO₂, sable, poudre d'extinction. Ne pas utiliser d'eau.

· **Produits extincteurs déconseillés pour des raisons de sécurité:** Jet d'eau à grand débit

· 5.2 Dangers particuliers résultant de la substance ou du mélange

Pas d'autres informations importantes disponibles.

· 5.3 Conseils aux pompiers

· **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

· 6.1 Précautions individuelles, équipement de protection et procédures d'urgence

Porter un équipement de sécurité. Eloigner les personnes non protégées.

· 6.2 Précautions pour la protection de l'environnement:

Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.

· 6.3 Méthodes et matériel de confinement et de nettoyage:

Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).

Evacuer les matériaux contaminés en tant que déchets conformément au point 13.

Assurer une aération suffisante.

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: DIAMOND AEROSOL SPRAY

(suite de la page 3)

Ne pas rincer à l'eau ou aux produits nettoyants aqueux.

· **6.4 Référence à d'autres rubriques**

Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.

Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.

Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

· **7.1 Précautions à prendre pour une manipulation sans danger**

Veiller à une bonne ventilation/aspiration du poste de travail.

Ouvrir et manipuler les récipients avec précaution.

Eviter la formation d'aérosols.

· **Préventions des incendies et des explosions:**

Tenir à l'abri des sources d'inflammation - ne pas fumer.

Tenir à l'abri de la chaleur.

Prendre des mesures contre les charges électrostatiques.

Tenir des appareils de protection respiratoire prêts.

· **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**

· **Stockage:**

· **Exigences concernant les lieux et conteneurs de stockage:** Stocker dans un endroit frais.

· **Indications concernant le stockage commun:** Pas nécessaire.

· **Autres indications sur les conditions de stockage:**

Tenir les emballages hermétiquement fermés.

Stocker au frais et au sec dans des fûts bien fermés.

Protéger de la forte chaleur et du rayonnement direct du soleil.

· **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

· **Indications complémentaires pour l'agencement des installations techniques:**

Sans autre indication, voir point 7.

· **8.1 Paramètres de contrôle**

· **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

64-17-5 éthanol

VME Valeur momentanée: 9500 mg/m³, 5000 ppm

Valeur à long terme: 1900 mg/m³, 1000 ppm

67-63-0 propane-2-ol

VME Valeur momentanée: 980 mg/m³, 400 ppm

67-56-1 méthanol

VME Valeur momentanée: 1300 mg/m³, 1000 ppm

Valeur à long terme: 260 mg/m³, 200 ppm

risque de pénétration percutanée, (11)

108-10-1 4-méthylpentane-2-one

VME Valeur momentanée: 208 mg/m³, 50 ppm

Valeur à long terme: 83 mg/m³, 20 ppm

· **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

(suite page 5)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: DIAMOND AEROSOL SPRAY

(suite de la page 4)

· **8.2 Contrôles de l'exposition**

· **Equipement de protection individuel:**

· **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

Conserver à part les vêtements de protection.

Eviter tout contact avec les yeux.

Eviter tout contact avec les yeux et avec la peau.

· **Protection respiratoire:**

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

· **Protection des mains:**



Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.

À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

· **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

· **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

Forme:	Aérosol
Couleur:	Selon désignation produit
Odeur:	Caractéristique
Seuil olfactif:	Non déterminé.

· **valeur du pH:** Non déterminé.

· **Changement d'état**

Point de fusion:	Non déterminé.
Point d'ébullition:	77 °C

· **Point d'éclair** -88 °C

(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: **DIAMOND AEROSOL SPRAY**

(suite de la page 5)

· Inflammabilité (solide, gazeux):	Non applicable.
· Température d'inflammation:	425 °C
· Température de décomposition:	Non déterminé.
· Auto-inflammation:	Le produit ne s'enflamme pas spontanément.
· Danger d'explosion:	Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.
· Limites d'explosion:	
Inférieure:	2.0 Vol %
Supérieure:	15.0 Vol %
· Pression de vapeur à 20 °C:	59 hPa
· Densité:	Non déterminée.
· Densité relative	Non déterminé.
· Densité de vapeur.	Non déterminé.
· Vitesse d'évaporation	Non déterminé.
· Solubilité dans/miscibilité avec l'eau:	Pas ou peu miscible
· Coefficient de partage (n-octanol/eau):	Non déterminé.
· Viscosité:	
Dynamique:	Non déterminé.
Cinématique:	Non déterminé.
· Teneur en solvants:	
Solvants organiques:	64.0 %
VOC (CE)	64,00 %
· 9.2 Autres informations	Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**
Toxique par ingestion, par contact cutané ou par inhalation.

· Valeurs LD/LC50 déterminantes pour la classification:		
67-56-1 méthanol		
Oral	LD50	5628 mg/kg (rat)
Dermique	LD50	15800 mg/kg (lapin)

(suite page 7)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: DIAMOND AEROSOL SPRAY

(suite de la page 6)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**
Provoque une sévère irritation des yeux.
- **Sensibilisation respiratoire ou cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Peut induire des anomalies génétiques.
- **Cancérogénicité**
Peut provoquer le cancer.
- **Toxicité pour la reproduction**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Risque avéré d'effets graves pour les organes.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 3 (D) (Classification propre): très polluant
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations, même pas en petite quantité.
Danger pour l'eau potable dès fuite d'une quantité minime dans le sous-sol.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

RUBRIQUE 14: Informations relatives au transport

- **14.1 Numéro ONU**
- **ADR, IMDG, IATA** UN1992

(suite page 8)

Fiche de données de sécurité
selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: **DIAMOND AEROSOL SPRAY**

(suite de la page 7)

· 14.2 Désignation officielle de transport de l'ONU	
· ADR	1992 LIQUIDE INFLAMMABLE, TOXIQUE, N.S.A. (gaz de pétrole liquéfiés adoucis, ÉTHANOL (ALCOOL ÉTHYLIQUE))
· IMDG	FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL))
· IATA	Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)

· **14.3 Classe(s) de danger pour le transport**· **ADR, IMDG, IATA**

· Classe	3 Liquides inflammables.
· Étiquette	3

· **14.4 Groupe d'emballage**· **ADR, IMDG, IATA**

II

· **14.5 Dangers pour l'environnement:**

Non applicable.

· **14.6 Précautions particulières à prendre par l'utilisateur**

Attention: Liquides inflammables.

· **Indice Kemler:**

33

· **No EMS:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC**

Non applicable.

· **Indications complémentaires de transport:**· **ADR**· **Quantités limitées (LQ)**

1L

· **Quantités exceptées (EQ)**

Code: E2

Quantité maximale nette par emballage intérieur: 30 ml
Quantité maximale nette par emballage extérieur: 500 ml· **Catégorie de transport**

2

· **Code de restriction en tunnels**

D/E

· **IMDG**· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml· **"Règlement type" de l'ONU:**

UN 1992 LIQUIDE INFLAMMABLE, TOXIQUE, N.S.A. (GAZ DE PÉTROLE LIQUÉFIÉS ADOUCIS, ÉTHANOL (ALCOOL ÉTHYLIQUE)), 3, II

FR

(suite page 9)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

Révision: 29.12.2015

Nom du produit: DIAMOND AEROSOL SPRAY

(suite de la page 8)

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I méthanol**
- **Catégorie SEVESO**
H2 TOXICITÉ AIGUË
P5c LIQUIDES INFLAMMABLES
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 50 t**
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 200 t**
- **Prescriptions nationales:**
- **Indications sur les restrictions de travail:**
Le personnel ne doit pas être exposé aux substances dangereuses cancérigènes contenues dans cette préparation. Les autorités peuvent autoriser des exceptions dans des cas particuliers.
- **15.2 Évaluation de la sécurité chimique:** *Une évaluation de la sécurité chimique n'a pas été réalisée.*

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

- **Phrases importantes**
H220 Gaz extrêmement inflammable.
H224 Liquide et vapeurs extrêmement inflammables.
H225 Liquide et vapeurs très inflammables.
H280 Contient un gaz sous pression; peut exploser sous l'effet de la chaleur.
H302 Nocif en cas d'ingestion.
H312 Nocif par contact cutané.
H315 Provoque une irritation cutanée.
H319 Provoque une sévère irritation des yeux.
H332 Nocif par inhalation.
H335 Peut irriter les voies respiratoires.
H336 Peut provoquer somnolence ou vertiges.
H340 Peut induire des anomalies génétiques.
H350 Peut provoquer le cancer.
H370 Risque avéré d'effets graves pour les organes.
- **Acronymes et abréviations:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1: Flammable gases, Hazard Category 1
Press. Gas C: Gases under pressure: Compressed gas
Flam. Liq. 1: Flammable liquids, Hazard Category 1
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4

(suite page 10)

Fiche de données de sécurité
selon 1907/2006/CE, Article 31

Date d'impression : 29.12.2015

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Nom du produit: DIAMOND AEROSOL SPRAY

(suite de la page 9)

*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Muta. 1B: Germ cell mutagenicity, Hazard Category 1B**Carc. 1A: Carcinogenicity, Hazard Category 1A**STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*

FR

Sicherheitsdatenblatt gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** DIAMOND AEROSOL SPRAY
- **Artikelnummer:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany
Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

24h Giftnotruf Munchen: +49 (0)89 19240
Toxikologische Abteilung der II. Medizinischen Klinik
rechts der Isar, Munchen. - www.toxinfo.org
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS02 Flamme

Flam. Liq. 2 H225 Flüssigkeit und Dampf leicht entzündbar.



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 3 H301 Giftig bei Verschlucken.

Acute Tox. 3 H311 Giftig bei Hautkontakt.

Acute Tox. 3 H331 Giftig bei Einatmen.



GHS08 Gesundheitsgefahr

Muta. 1B H340 Kann genetische Defekte verursachen.

(Fortsetzung auf Seite 2)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

Handelsname: DIAMOND AEROSOL SPRAY

(Fortsetzung von Seite 1)

Carc. 1A H350 Kann Krebs erzeugen.

STOT SE 1 H370 Schädigt die Organe.



GHS07

Eye Irrit. 2 H319 Verursacht schwere Augenreizung.

· 2.2 Kennzeichnungselemente

· Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS02

GHS06

GHS08

· Signalwort Gefahr

· Gefahrbestimmende Komponenten zur Etikettierung:

Erdölgase, verflüssigt, gesüßt

Methanol

4-Methyl-pentan-2-on

· Gefahrenhinweise

H225 Flüssigkeit und Dampf leicht entzündbar.

H301+H311+H331 Giftig bei Verschlucken, Hautkontakt oder Einatmen.

H319 Verursacht schwere Augenreizung.

H340 Kann genetische Defekte verursachen.

H350 Kann Krebs erzeugen.

H370 Schädigt die Organe.

· Sicherheitshinweise

P301+P310 BEI VERSCHLUCKEN: Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.

P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen/duschen.

P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.

P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).

P405 Unter Verschluss aufbewahren.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· Zusätzliche Angaben:

Nur für gewerbliche Anwender.

· 2.3 Sonstige Gefahren

· Ergebnisse der PBT- und vPvB-Beurteilung

· PBT: Nicht anwendbar.

· vPvB: Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.2 Chemische Charakterisierung: Gemische

· Beschreibung: Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

Handelsname: DIAMOND AEROSOL SPRAY

(Fortsetzung von Seite 2)

· Gefährliche Inhaltsstoffe:		
CAS: 64-17-5 EINECS: 200-578-6	Ethanol Flam. Liq. 2, H225	25-50%
CAS: 68476-86-8 EINECS: 270-705-8	Erdölgase, verflüssigt, gesüßt Flam. Gas 1, H220; Flam. Liq. 1, H224; Muta. 1B, H340; Carc. 1A, H350; Press. Gas C, H280	25-50%
CAS: 67-63-0 EINECS: 200-661-7	Propan-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 67-56-1 EINECS: 200-659-6	Methanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≤ 2,5%
CAS: 108-10-1 EINECS: 203-550-1	4-Methyl-pentan-2-on Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2,5%
CAS: 7782-40-3 EINECS: 231-953-2	diamond natural monocrystalline powder	≤ 2,5%

· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen

· Allgemeine Hinweise:

Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.
Atenschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.
Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.

· Nach Einatmen:

Frischlufft- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.
Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

· Nach Hautkontakt: Sofort mit Wasser und Seife abwaschen und gut nachspülen.

· Nach Augenkontakt:

Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.

· Nach Verschlucken: Kein Erbrechen herbeiführen, sofort Arzthilfe zuziehen.

· 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen

Keine weiteren relevanten Informationen verfügbar.

· 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· 5.1 Löschmittel

· **Geeignete Löschmittel:** CO₂, Sand, Löschpulver. Kein Wasser verwenden.

· **Aus Sicherheitsgründen ungeeignete Löschmittel:** Wasser im Vollstrahl

· 5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren

Keine weiteren relevanten Informationen verfügbar.

· 5.3 Hinweise für die Brandbekämpfung

· **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

DE

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

Handelsname: **DIAMOND AEROSOL SPRAY**

(Fortsetzung von Seite 3)

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **6.2 Umweltschutzmaßnahmen:** Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
Für ausreichende Lüftung sorgen.
Nicht mit Wasser oder wässrigen Reinigungsmitteln wegspülen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Behälter mit Vorsicht öffnen und handhaben.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:**
Zündquellen fernhalten - nicht rauchen.
Vor Hitze schützen.
Maßnahmen gegen elektrostatische Aufladung treffen.
Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** An einem kühlen Ort lagern.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:**
Behälter dicht geschlossen halten.
In gut verschlossenen Gebinden kühl und trocken lagern.
Vor Hitze und direkter Sonnenbestrahlung schützen.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

· 8.1 Zu überwachende Parameter

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

64-17-5 Ethanol

AGW	Langzeitwert: 960 mg/m ³ , 500 ml/m ³ 2(II);DFG, Y
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(Fortsetzung auf Seite 5)

DE

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

Handelsname: DIAMOND AEROSOL SPRAY

(Fortsetzung von Seite 4)

67-63-0 Propan-2-ol

AGW Langzeitwert: 500 mg/m³, 200 ml/m³
2(II);DFG, Y

67-56-1 Methanol

AGW Langzeitwert: 270 mg/m³, 200 ml/m³
4(II);DFG, EU, H, Y

108-10-1 4-Methyl-pentan-2-on

AGW Langzeitwert: 83 mg/m³, 20 ml/m³
2(I);DFG, EU, H, Y

· Bestandteile mit biologischen Grenzwerten:**67-63-0 Propan-2-ol**

BGW 25 mg/l
Untersuchungsmaterial: Vollblut
Probennahmezeitpunkt: Expositionsende bzw. Schichtende
Parameter: Aceton

25 mg/l
Untersuchungsmaterial: Urin
Probennahmezeitpunkt: Expositionsende bzw. Schichtende
Parameter: Aceton

67-56-1 Methanol

BGW 30 mg/l
Untersuchungsmaterial: Urin
Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten,
Expositionsende bzw. Schichtende
Parameter: Methanol

108-10-1 4-Methyl-pentan-2-on

BGW 3,5 mg/l
Untersuchungsmaterial: Urin
Probennahmezeitpunkt: Expositionsende bzw. Schichtende
Parameter: 4-Methyl-pentan-2-on

· **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

· **8.2 Begrenzung und Überwachung der Exposition**

· **Persönliche Schutzausrüstung:**

· **Allgemeine Schutz- und Hygienemaßnahmen:**

- Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
- Beschmutzte, getränkte Kleidung sofort ausziehen.
- Vor den Pausen und bei Arbeitsende Hände waschen.
- Getrennte Aufbewahrung der Schutzkleidung.
- Berührung mit den Augen vermeiden.
- Berührung mit den Augen und der Haut vermeiden.

· **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

· **Handschutz:**



Schutzhandschuhe

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

Handelsname: DIAMOND AEROSOL SPRAY

(Fortsetzung von Seite 5)

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

- **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

- **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

- **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

- **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

- **Allgemeine Angaben**

- **Aussehen:**

Form: Aerosol
Farbe: Gemäß Produktbezeichnung

- **Geruch:** Charakteristisch

- **Geruchsschwelle:** Nicht bestimmt.

- **pH-Wert:** Nicht bestimmt.

- **Zustandsänderung**

Schmelzpunkt/Schmelzbereich: Nicht bestimmt.

Siedepunkt/Siedebereich: 77 °C

- **Flammpunkt:** -88 °C

- **Entzündlichkeit (fest, gasförmig):** Nicht anwendbar.

- **Zündtemperatur:** 425 °C

- **Zersetzungstemperatur:** Nicht bestimmt.

- **Selbstentzündlichkeit:** Das Produkt ist nicht selbstentzündlich.

- **Explosionsgefahr:** Das Produkt ist nicht explosionsgefährlich, jedoch ist die Bildung explosionsgefährlicher Dampf-/Luftgemische möglich.

- **Explosionsgrenzen:**

Untere: 2.0 Vol %

Obere: 15.0 Vol %

- **Dampfdruck bei 20 °C:** 59 hPa

- **Dichte:** Nicht bestimmt.

- **Relative Dichte:** Nicht bestimmt.

- **Dampfdichte:** Nicht bestimmt.

- **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

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Handelsname: **DIAMOND AEROSOL SPRAY**

(Fortsetzung von Seite 6)

- | | |
|---|--|
| · Löslichkeit in / Mischbarkeit mit Wasser: | Nicht bzw. wenig mischbar. |
| · Verteilungskoeffizient (n-Octanol/Wasser): | Nicht bestimmt. |
| · Viskosität: | |
| Dynamisch: | Nicht bestimmt. |
| Kinematisch: | Nicht bestimmt. |
| · Lösemittelgehalt: | |
| Organische Lösemittel: | 64.0 % |
| VOC (EU) | 64,00 % |
| · 9.2 Sonstige Angaben | Keine weiteren relevanten Informationen verfügbar. |

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität**
Giftig bei Verschlucken, Hautkontakt oder Einatmen.

- **Einstufungsrelevante LD/LC50-Werte:**

67-56-1 Methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenreizung.
- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität**
Kann genetische Defekte verursachen.
- **Karzinogenität**
Kann Krebs erzeugen.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Schädigt die Organe.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

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Handelsname: DIAMOND AEROSOL SPRAY

(Fortsetzung von Seite 7)

· **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.


ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 3 (Selbsteinstufung): stark wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen, auch nicht in kleinen Mengen.
Trinkwassergefährdung bereits beim Auslaufen geringster Mengen in den Untergrund.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

ABSCHNITT 14: Angaben zum Transport

- | | |
|--|--|
| <ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA | <p style="text-align: right;">UN1992</p> |
| <ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG · IATA | <p>1992 ENTZÜNDBARER FLÜSSIGER STOFF, GIFTIG, N.A.G. (Erdölgase, verflüssigt, gesüßt, ETHANOL (ETHYLALKOHOL))</p> <p>FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL))</p> <p>Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)</p> |
| <ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG, IATA | <div style="text-align: center; margin-bottom: 10px;">  </div> <ul style="list-style-type: none"> · Klasse · Gefahrzettel |
| | <p style="text-align: right;">3 Entzündbare flüssige Stoffe</p> <p style="text-align: right;">3</p> |

(Fortsetzung auf Seite 9)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

Handelsname: DIAMOND AEROSOL SPRAY

(Fortsetzung von Seite 8)

· 14.4 Verpackungsgruppe · ADR, IMDG, IATA	II
· 14.5 Umweltgefahren:	<i>Nicht anwendbar.</i>
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender · Kemler-Zahl: · EMS-Nummer: · Stowage Category · Stowage Code	<i>Achtung: Entzündbare flüssige Stoffe</i> 33 <i>F-E,S-D</i> B <i>SW2 Clear of living quarters.</i>
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code	<i>Nicht anwendbar.</i>
· Transport/weitere Angaben:	
· ADR · Begrenzte Menge (LQ) · Freigestellte Mengen (EQ)	1L <i>Code: E2</i> <i>Höchste Nettomenge je Innenverpackung: 30 ml</i> <i>Höchste Nettomenge je Außenverpackung: 500 ml</i>
· Beförderungskategorie · Tunnelbeschränkungscode	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L <i>Code: E2</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 500 ml</i>
· UN "Model Regulation":	UN 1992 ENTZÜNDBARER FLÜSSIGER STOFF, GIFTIG, N.A.G. (ERDÖLGASE, VERFLÜSSIGT, GESÜST, ETHANOL (ETHYLALKOHOL)), 3, II

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I Methanol**
- **Seveso-Kategorie**
H2 AKUT TOXISCH
P5c ENTZÜNDBARE FLÜSSIGKEITEN
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 50 t**
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 200 t**
- **Nationale Vorschriften:**
- **Hinweise zur Beschäftigungsbeschränkung:**
Arbeitnehmer dürfen den in dieser Zubereitung enthaltenen krebserzeugenden Gefahrstoffen nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.

(Fortsetzung auf Seite 10)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 29.12.2015

überarbeitet am: 29.12.2015

Handelsname: DIAMOND AEROSOL SPRAY

(Fortsetzung von Seite 9)

· Technische Anleitung Luft:

Klasse	Anteil in %
I	2,5
NK	61,5

- **Wassergefährdungsklasse:** WGK 3 (Selbsteinstufung): stark wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

· Relevante Sätze

- H220 Extrem entzündbares Gas.
- H224 Flüssigkeit und Dampf extrem entzündbar.
- H225 Flüssigkeit und Dampf leicht entzündbar.
- H280 Enthält Gas unter Druck; kann bei Erwärmung explodieren.
- H302 Gesundheitsschädlich bei Verschlucken.
- H312 Gesundheitsschädlich bei Hautkontakt.
- H315 Verursacht Hautreizungen.
- H319 Verursacht schwere Augenreizung.
- H332 Gesundheitsschädlich bei Einatmen.
- H335 Kann die Atemwege reizen.
- H336 Kann Schläfrigkeit und Benommenheit verursachen.
- H340 Kann genetische Defekte verursachen.
- H350 Kann Krebs erzeugen.
- H370 Schädigt die Organe.

· Abkürzungen und Akronyme:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases, Hazard Category 1
- Press. Gas C: Gases under pressure: Compressed gas
- Flam. Liq. 1: Flammable liquids, Hazard Category 1
- Flam. Liq. 2: Flammable liquids, Hazard Category 2
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
- Carc. 1A: Carcinogenicity, Hazard Category 1A
- STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** DIAMOND AEROSOL SPRAY

· **Articolo numero:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**

Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS02 fiamma

Flam. Liq. 2 H225 Liquido e vapori facilmente infiammabili.



GHS06 teschio e tibie incrociate

Acute Tox. 3 H301 Tossico se ingerito.

Acute Tox. 3 H311 Tossico per contatto con la pelle.

Acute Tox. 3 H331 Tossico se inalato.



GHS08 pericolo per la salute

Muta. 1B H340 Può provocare alterazioni genetiche.

Carc. 1A H350 Può provocare il cancro.

STOT SE 1 H370 Provoca danni agli organi.

(continua a pagina 2)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: DIAMOND AEROSOL SPRAY

(Segue da pagina 1)



GHS07

Eye Irrit. 2 H319 Provoca grave irritazione oculare.

· **2.2 Elementi dell'etichetta**

· **Etichettatura secondo il regolamento (CE) n. 1272/2008**

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS02

GHS06

GHS08

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**

gas di petrolio, liquefatti, addolciti

metanolo

4-metil-pentan-2-one

· **Indicazioni di pericolo**

H225 Liquido e vapori facilmente infiammabili.

H301+H311+H331 Tossico se ingerito, a contatto con la pelle o se inalato.

H319 Provoca grave irritazione oculare.

H340 Può provocare alterazioni genetiche.

H350 Può provocare il cancro.

H370 Provoca danni agli organi.

· **Consigli di prudenza**

P301+P310 **IN CASO DI INGESTIONE:** contattare immediatamente un CENTRO ANTIVELENI/un medico.

P303+P361+P353 **IN CASO DI CONTATTO CON LA PELLE (o con i capelli):** togliere immediatamente tutti gli indumenti contaminati. Sciacquare la pelle/fare una doccia.

P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI:** sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P321 Trattamento specifico (vedere su questa etichetta).

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.2 Caratteristiche chimiche: Miscela**

· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

(continua a pagina 3)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: DIAMOND AEROSOL SPRAY

(Segue da pagina 2)

· Sostanze pericolose:		
CAS: 64-17-5 EINECS: 200-578-6	etanolo Flam. Liq. 2, H225	25-50%
CAS: 68476-86-8 EINECS: 270-705-8	gas di petrolio, liquefatti, addolciti Flam. Gas 1, H220; Flam. Liq. 1, H224; Muta. 1B, H340; Carc. 1A, H350; Press. Gas C, H280	25-50%
CAS: 67-63-0 EINECS: 200-661-7	2-propanolo Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 67-56-1 EINECS: 200-659-6	metanolo Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≤ 2,5%
CAS: 108-10-1 EINECS: 203-550-1	4-metil-pentan-2-one Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2,5%
CAS: 7782-40-3 EINECS: 231-953-2	diamond natural monocrystalline powder	≤ 2,5%

· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

Allontanare immediatamente gli abiti contaminati dal prodotto.

Levarsi la maschera protettiva solamente dopo aver tolto gli abiti contaminati.

In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.

· **Inalazione:**

Portare il soggetto in zona ben areata o somministrare ossigeno; chiedere l'intervento di un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.

· **Contatto con gli occhi:**

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore consultare il medico.

· **Ingestione:** Non provocare il vomito, chiamare subito il medico.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:** CO₂, sabbia, polvere. Non usare acqua.

· **Mezzi di estinzione inadatti per motivi di sicurezza:** Getti d'acqua

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** Indossare il respiratore.

(continua a pagina 4)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: **DIAMOND AEROSOL SPRAY**

(Segue da pagina 3)

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**
Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- **6.2 Precauzioni ambientali:** Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).
Smaltimento del materiale contaminato conformemente al punto 13.
Provvedere ad una sufficiente areazione.
Non dilavare con acqua o detergenti liquidi.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura**
Accurata ventilazione/aspirazione nei luoghi di lavoro.
Aprire e manipolare i recipienti con cautela.
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:**
Tenere lontano da fonti di calore, non fumare.
Proteggere dal calore.
Adottare provvedimenti contro cariche elettrostatiche.
Tener pronto il respiratore.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Conservare in ambiente fresco.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**
Mantenere i recipienti ermeticamente chiusi.
Conservare in luogo fresco e asciutto in fusti ben chiusi.
Proteggere dal calore e dai raggi diretti del sole.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **8.1 Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

64-17-5 etanolo

TWA Valore a breve termine: 1884 mg/m³, 1000 ppm
A3

67-63-0 2-propanolo

TWA Valore a breve termine: 983 mg/m³, 400 ppm
Valore a lungo termine: 492 mg/m³, 200 ppm
A4

(continua a pagina 5)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: DIAMOND AEROSOL SPRAY

(Segue da pagina 4)

67-56-1 metanolo

TWA	Valore a breve termine: 328 mg/m ³ , 250 ppm Valore a lungo termine: 262 mg/m ³ , 200 ppm Cute, IBE
VL	Valore a lungo termine: 260 mg/m ³ , 200 ppm Pelle

108-10-1 4-metil-pentan-2-one

TWA	Valore a breve termine: 307 mg/m ³ , 75 ppm Valore a lungo termine: 82 mg/m ³ , 20 ppm A3, IBE
VL	Valore a breve termine: 208 mg/m ³ , 50 ppm Valore a lungo termine: 83 mg/m ³ , 20 ppm

· Componenti con valori limite biologici:**67-63-0 2-propanolo**

IBE	40 mg/l Campioni: urine Momento del prelievo: f.t.f.s.l Indicatore biologico: acetone
-----	--

67-56-1 metanolo

IBE	15 mg/l Campioni: urine Momento del prelievo: a fine turno Indicatore biologico: metanolo
-----	--

108-10-1 4-metil-pentan-2-one

IBE	1 mg/l Campioni: urine Momento del prelievo: a fine turno Indicatore biologico: metil isobutil chetone (MIBK)
-----	--

· **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

· 8.2 Controlli dell'esposizione**· Mezzi protettivi individuali:****· Norme generali protettive e di igiene del lavoro:**

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Custodire separatamente l'equipaggiamento protettivo.
- Evitare il contatto con gli occhi.
- Evitare il contatto con gli occhi e la pelle.

· Maschera protettiva:

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

· Guanti protettivi:

Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

(continua a pagina 6)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: DIAMOND AEROSOL SPRAY

(Segue da pagina 5)

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

- **Materiale dei guanti**

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

- **Tempo di permeazione del materiale dei guanti**

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

- **Occhiali protettivi:**



Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

- **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**

- **Indicazioni generali**

- **Aspetto:**

Forma:	Aerosol
Colore:	In conformità con la denominazione del prodotto
· Odore:	Caratteristico
· Soglia olfattiva:	Non definito.

- **valori di pH:** Non definito.

- **Cambiamento di stato**

Temperatura di fusione/ambito di fusione:	Non definito.
Temperatura di ebollizione/ambito di ebollizione:	77 °C

- **Punto di infiammabilità:** -88 °C

- **Infiammabilità (solido, gassoso):** Non applicabile.

- **Temperatura di accensione:** 425 °C

- **Temperatura di decomposizione:** Non definito.

- **Autoaccensione:** Prodotto non autoinfiammabile.

- **Pericolo di esplosione:** Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.

- **Limiti di infiammabilità:**

Inferiore:	2.0 Vol %
Superiore:	15.0 Vol %

- **Tensione di vapore a 20 °C:** 59 hPa

- **Densità:** Non definito.

- **Densità relativa** Non definito.

- **Densità del vapore** Non definito.

- **Velocità di evaporazione** Non definito.

- **Solubilità in/Miscibilità con acqua:** Poco e/o non miscibile.

- **Coefficiente di distribuzione (n-Octanol/acqua):** Non definito.

(continua a pagina 7)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: DIAMOND AEROSOL SPRAY

(Segue da pagina 6)

- | | |
|---------------------------------|--|
| · Viscosità: | |
| Dinamica: | Non definito. |
| Cinematica: | Non definito. |
| · Tenore del solvente: | |
| Solventi organici: | 64.0 % |
| VOC (CE) | 64,00 % |
| · 9.2 Altre informazioni | Non sono disponibili altre informazioni. |

SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta**
Tossico se ingerito, a contatto con la pelle o se inalato.

- **Valori LD/LC50 rilevanti per la classificazione:**

67-56-1 metanolo

Orale	LD50	5628 mg/kg (rat)
Cutaneo	LD50	15800 mg/kg (rabbit)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca grave irritazione oculare.
- **Sensibilizzazione respiratoria o cutanea**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Può provocare alterazioni genetiche.
- **Cancerogenicità**
Può provocare il cancro.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Provoca danni agli organi.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

(continua a pagina 8)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: **DIAMOND AEROSOL SPRAY**

(Segue da pagina 7)


SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 3 (D) (Autoclassificazione): molto pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature, anche in piccole dosi.
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di quantità minime di prodotto.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

SEZIONE 14: Informazioni sul trasporto

· 14.1 Numero ONU · ADR, IMDG, IATA	UN1992
· 14.2 Nome di spedizione dell'ONU · ADR · IMDG · IATA	1992 LIQUIDO INFIAMMABILE, TOSSICO, N.A.S. (gas di petrolio, liquefatti, addolciti, ETANOLO (ALCOL ETILICO)) FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL)) Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)
· 14.3 Classi di pericolo connesso al trasporto · ADR, IMDG, IATA	
	
· Classe · Etichetta	3 Liquidi infiammabili 3
· 14.4 Gruppo di imballaggio · ADR, IMDG, IATA	II
· 14.5 Pericoli per l'ambiente:	Non applicabile.
· 14.6 Precauzioni speciali per gli utilizzatori	Attenzione: Liquidi infiammabili

(continua a pagina 9)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: DIAMOND AEROSOL SPRAY

(Segue da pagina 8)

· Numero Kemler:	33
· Numero EMS:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR	
· Quantità limitate (LQ)	1L
· Quantità esenti (EQ)	Codice: E2 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 500 ml
· Categoria di trasporto	2
· Codice di restrizione in galleria	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1992 LIQUIDO INFIAMMABILE, TOSSICO, N.A.S. (GAS DI PETROLIO, LIQUEFATTI, ADDOLCITI, ETANOLO (ALCOL ETILICO)), 3, II

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
 - **Direttiva 2012/18/UE**
 - **Sostanze pericolose specificate - ALLEGATO I metanolo**
 - **Categoria Seveso**
H2 TOSSICITÀ ACUTA
P5c LIQUIDI INFIAMMABILI
 - **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 50 t**
 - **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 200 t**
 - **Disposizioni nazionali:**
 - **Indicazioni relative alla limitazione delle attività lavorative:**
Il personale non deve essere esposto alle sostanze cancerogene contenute in questo preparato L'autorità può ammettere nei singoli casi delle eccezioni.
 - **Istruzione tecnica aria:**
- | Classe | quota in % |
|--------|------------|
| NC | 64,0 |
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

(continua a pagina 10)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 29.12.2015

Revisione: 29.12.2015

Denominazione commerciale: DIAMOND AEROSOL SPRAY

(Segue da pagina 9)

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· **Frasi rilevanti**

- H220 Gas altamente infiammabile.
- H224 Liquido e vapori altamente infiammabili.
- H225 Liquido e vapori facilmente infiammabili.
- H280 Contiene gas sotto pressione; può esplodere se riscaldato.
- H302 Nocivo se ingerito.
- H312 Nocivo per contatto con la pelle.
- H315 Provoca irritazione cutanea.
- H319 Provoca grave irritazione oculare.
- H332 Nocivo se inalato.
- H335 Può irritare le vie respiratorie.
- H336 Può provocare sonnolenza o vertigini.
- H340 Può provocare alterazioni genetiche.
- H350 Può provocare il cancro.
- H370 Provoca danni agli organi.

· **Abbreviazioni e acronimi:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases, Hazard Category 1
- Press. Gas C: Gases under pressure: Compressed gas
- Flam. Liq. 1: Flammable liquids, Hazard Category 1
- Flam. Liq. 2: Flammable liquids, Hazard Category 2
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
- Carc. 1A: Carcinogenicity, Hazard Category 1A
- STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

안전지침서

제조조의와MSDS/2006/E에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

1 화학제품과 회사에 관한 정보

제품제품제자

· **제품명:** DIAMOND AEROSOL SPRAY

· **상품번호:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31

해당해당물질이나 혼합물과관련관용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.

· **제품의 권고 용도와 사용 제한** (제한 시험 실 화 학 품)

· **안전데이터표(Safety Data Sheet) 내 공급 업체 관련 정보**

· **제조자/수입자/유통 업체 정보**

Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Samchang Commercial Co., Ltd.
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298

· **추가적인 정보** (특정 제품 사용 가능) (duct safety department)

· **비상연락 전화번호:**

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성.위험성

· **순물질 또는 혼합물**의 분류분류



화염

인화성 액체 구분2 H225 고인화성 액체 및 증기



두개골과 대퇴골

급성 독성(경구) 구분3 H301 삼키면 유독함
급성 독성(경피) 구분3 H311 피부와 접촉하면 유독함
급성 독성(흡입) 구분3 H331 흡입하면 유독함



건강에 위험

생식세포 변이원성 구분1B H340 유전적인 결함을 일으킬 수 있음
발암성 구분1A H350 암을 일으킬 수 있음
표적장기-1회노출 구분1 H370 신체 중에 손상을 일으킴



(2 쪽에 계속)

안전지침서

제조조의와 7/2006/E에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

(1 쪽부터계속)

심한 눈 손상/자극성 구분2 H319 눈에 심한 자극을 일으킴

- 라벨표가요소요소
- 라벨라벨과발요소
- 그림문자



GHS02 GHS06 GHS08

- 신호어 위험
- 상표상에명확히위험성이표시된성분:

Petroleum gases, liquefied, sweetened
Methyl Alcohol
4-methylpentan-2-one

유해유해유해유해문구

고인화성 액체 및 증기
삼키거나 피부에 접촉하거나 흡입하면 유독함.
눈에 심한 자극을 일으킴
유전적인 결함을 일으킬 수 있음
암을 일으킬 수 있음
신체 중에 손상을 일으킴

- 예방조차문구문구

삼켰을 시: 즉시 독성물질센터/병원 연락 필요.
피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 행구시오.
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
(라벨 참조) 처치를 하시오.
잠금장치가 있는 저장장소에 저장하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

기타기타유해성

- PBT(잔류성, 생물농축성, 물질분해성) 및 vPvB(고 잔류성, 고 생물농축성, 물질분해성) 결과
- PBT(잔류성, 생물농축성, 물질분해성) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성, 물질분해성) 당사항 없음.

3 구성성분의 명칭 및 함유량

- 화학적 특성: 혼합물

설명설명설명해한 첨가물 이 함유된 아래에 열거된 물질로 만들어진 혼합물.

- 위험요소요소

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055 ⚠ 인화성 액체 구분2, H225	25-50%
68476-86-8	Petroleum gases, liquefied, sweetened ⚠ 인화성 가스 구분1, H220; 인화성 액체 구분1, H224; ⚠ 생식세포 변이원성 구분1B, H340; 발암성 구분1A, H350; 고압가스(압축가스), H280	25-50%

(3 쪽에계속)

안전지침서

제 제조 의 외 7/2006/E 에 따라 라 따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

(3 쪽부터 계속)

개인 보호 장비에 대한 정보는 제8 장 을 참고 하 시 오.
 쓰레기 처 리 에 대한 정보는 제13 장 을 참고 하 시 오.

7 취급 및 저장방법

취급 취급 취급

안전 안전 안전을 위한 예방 조치

작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.
 조심스럽게 용기를 개봉하거나 취급한다.
 연무질이 형성되는 것을 피한다.

화재 화재 예방 조치 및 화재 발생 시 대응에 관한 정보

발화 요소는 멀리 둔다. 금연.
 열로부터 보호한다.
 정전기 의 충 전 으로부터 보호한다.
 호흡 보호 장 비 를 항상 비치 한다.

· 혼합 위험성 및 안전 주의 사항 조건

보관 보관 보관

- **안전한 저장 방법** : 방화 안전 장소에 보관한다.
- **하나의 공통 용기** : 다른 용기에서 혼합물 사용은 불가능하다.
- **보관 조건에 관한 추가 정보** : 용기를 새지 않게 밀폐한 채 보관한다. 밀폐된 용기 속에서 누출하고 건조하게 보관한다. 열이나 직사광선으로부터 보호한다.
- **구체적 최종 사용자** : 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- **첨단 시설 디자 인 에 대한 추가 정보** : 더 이상 의 자료 는 없 음. 항 목 7 을 참고 하 시 오.

통제 통제 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

**64-17-5 Ethyl Alcohol, Absolute, 200 Proof
 Reagent, ACS (Ethanol)
 15055**

TLV (KR)	장기간의 값: 1900 mg/m ³ , 1000 ppm
PEL (US)	장기간의 값: 1900 mg/m ³ , 1000 ppm
REL (US)	장기간의 값: 1900 mg/m ³ , 1000 ppm
TLV (US)	단기간의 값: 1880 mg/m ³ , 1000 ppm

67-63-0 propan-2-ol

TLV (KR)	단기간의 값: 980 mg/m ³ , 400 ppm 장기간의 값: 480 mg/m ³ , 200 ppm
PEL (US)	장기간의 값: 980 mg/m ³ , 400 ppm
REL (US)	단기간의 값: 1225 mg/m ³ , 500 ppm 장기간의 값: 980 mg/m ³ , 400 ppm
TLV (US)	단기간의 값: 984 mg/m ³ , 400 ppm 장기간의 값: 492 mg/m ³ , 200 ppm BEI

(5 쪽에 계속)

안전지침서

제조조의와 2007/2006/EU에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

(4 쪽부터계속)

67-56-1 Methyl Alcohol	
TLV (KR)	단기간의값: 310 mg/m ³ , 250 ppm 장기간의값: 260 mg/m ³ , 200 ppm Skin
IOELV (EU)	장기간의값: 260 mg/m ³ , 200 ppm Skin
PEL (US)	장기간의값: 260 mg/m ³ , 200 ppm
REL (US)	단기간의값: 325 mg/m ³ , 250 ppm 장기간의값: 260 mg/m ³ , 200 ppm Skin
TLV (US)	단기간의값: 328 mg/m ³ , 250 ppm 장기간의값: 262 mg/m ³ , 200 ppm Skin; BEI
108-10-1 4-methylpentan-2-one	
TLV (KR)	단기간의값: 300 mg/m ³ , 75 ppm 장기간의값: 205 mg/m ³ , 50 ppm
IOELV (EU)	단기간의값: 208 mg/m ³ , 50 ppm 장기간의값: 83 mg/m ³ , 20 ppm
PEL (US)	장기간의값: 410 mg/m ³ , 100 ppm
REL (US)	단기간의값: 300 mg/m ³ , 75 ppm 장기간의값: 205 mg/m ³ , 50 ppm
TLV (US)	단기간의값: 307 mg/m ³ , 75 ppm 장기간의값: 82 mg/m ³ , 20 ppm BEI

· **추가정보** 정보 할 당시에 유효 한 목록을 기초로 사용했다.

노출 통제를통제 통제
개인보호장구

· **일반적보호조치및위생조치:**

- 식료품, 음료수와 사료로부터 멀리떨어뜨려 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식전이나 작업이 끝날때마다 손을 씻는다.
- 방호복은 따로보관한다.
- 눈과의 접촉을 피한다.
- 눈과 피부와의 접촉은 피한다.

· **호흡기보호보호**

· 단 시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

보수보호보호



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율 과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑의재료**

· 적합한장갑의선정은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

(6 쪽에계속)

안전지침서

제조조의와 2007/2006/EU에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

보충 보호보호

(5 쪽부터계속)



팍조이는보안경

9 물리화학적 특성

기본 기본 물리 화학적 특성에 대한 정보

· 일반정보	
외형외형외형	에어로졸
· 물리상태	제품 표시에 따름
· 색:	특색있는
냄새냄새냄새	알맞지않다.
· 후각역치	
· pH:	알맞지않다.
· 상태변화	
· 녹는점/어는점:	맞지않는
· 초기초기 끓는 점과 끓는점범위범위	77 °C
· 인화점:	-88 °C
· 인화성 고체/기체/기체	해당사항 없음.
· 점화온도:	425 °C
· 분해온도	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없지만, 폭발가능성이있는증기화합물/공기화합물의형성가능성이있다.
· 인화 안전 인화폭발 위험의 상한하한	
· 아래로:	2.0 Vol %
· 위로위로위로	15.0 Vol %
· 증기압 의 경우 20 °C:	59 hPa
· 밀도밀도밀도	맞지않는다.
· 비중비중비중	알맞지않다.
· 증기밀도:	알맞지않다.
· 증발 증발 증발 속도	알맞지않다.
· 용해도:	
· 물:	각각의경우에따라서는거의혼합할수없는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도점도점도	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· 용매내용물	
· 유기용매:	64.0 %
· VOC (EU)	64.00 %

(7 쪽에계속)

안전지침서

제조조의와 2006/E1에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

(6 쪽부터계속)

기타 정보 정보 추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 유해 반응의 가능성 / 피해 야 할 조건 조건 정에 따라 사용 할 경우 해체는 없다
- 유해 반응 가능성 위험한 반응으로는 알려지지 않았다.
- 피해 야 할 조건 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 유해 물질 추가적인 정보가 존재하지 않습니다.
- 유해 분 해 물질: 위험성 있는 분 해 물질은 알려지지 않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성 독성

· LD/LC50-수 체에 대한 분류		
67-56-1 Methyl Alcohol		
구강의	LD50	5628 mg/kg (rat)
피부의	LD50	15800 mg/kg (rabbit)

- 일체적 자극 효과
- 피부 피부 부 작용 또는 자극 성: 무 자극
- 심한 심한 부 작용 또는 자극 성: 자극
- 감각 화: 민감한 영향이 없는 것으로 알려져 있다.
- 추가적인 독성에 관한 정보
- 이제 품은 유럽 공동체의 공동 분류 원칙의 합법적인 절차에 근거하여 최근에 발 호 된 원고에서 아래 위험 들 의 사전 준비에 대하여 제시 하고 있다.
- 독성의
- 자극적인
- 압을 유발 하는
- 이제 품은 유 전적인 장애를 유발 할 수 있다.
- 다음 다음 중류 의 잠재적인 효과에 대한 정보
- CML 효과 유발 유 발 유 발 번 이성 그 래 고 생 생 독 성
- 생식 세포 번이 원성 구분 1B, 발 압 성 구분 1A

12 환경에 미치는 영향

- 독성 독성 독성
- 수생 독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물 농 축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양 내 이동성 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태학 정보
- 일반 열 분 해 특 징
- 수질 오염 등급 3 (자체 등급 분류): 심하게 수질 오염이 된 지하수나, 하천으로 또는 하수도 망 에 도 달 하지 않게 한다. 역시 극 소 수 의 양 이 라 도 안 된 다. 지하수로 아주 미세한 양이 유입 되었을 경우 엔 이미 식 수 오염 상태 이다

(8 쪽에 계속)

안전지침서

제조조의 위험성/2006/EU에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

- PBT(잔류성, 생물농축성, 독성, 물성, 물질, 물질, vPvB(고 잔류성, 고 생물농축성, 물성, 물질, 물질, vPvB) 결과
 - PBT(잔류성, 생물농축성, 독성, 물성, 물질, 물질) 당사항 없음.
 - vPvB(고 잔류성, 고 생물농축성, 물성, 물질, 물질) 당사항 없음.
- 기타기타 **부작용** 추가적인 정보가 존재하지 않습니다.

(7 쪽부터계속)

13 폐기시 주의사항

- 폐기물처리방법
권고 권고 **생물**쓰레기와 함께 처리되어서는 안된다. 하수도망으로 유입되어서는 안된다.
- 비위생적 포장포장
권고 권고 **생물**의 지침에 입각한 쓰레기 처리.

14 운송에 필요한 정보

유엔 유엔번호

- ADR, IMDG, IATA UN1992

· 적정적정명

- ADR 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL))
- IMDG FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL))
- IATA Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)

교통 교통위험물질

- ADR, IMDG, IATA



등급 등급 등급

- 위험물 라벨라벨 3 발화성용액

· 용기 등급

- ADR, IMDG, IATA II

· 환경적 유해물질:

해당사항 없음.

· 이동시 특별 예방조치

경고: 발화성용액

위험 위험물질 코드

33

· EBC 번호번호

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따라
별크별 운송 운송

해당사항 없음.

(9 쪽에계속)

안전지침서

제조조의 위험성/2006/E에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

(8 쪽부터계속)

· 운송/추가정보	
· ADR 한정량제한수량(수량)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· 운송분류구분 · 터널제한수량코드	2 D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN번호	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (PETROLEUM GASES, LIQUEFIED, SWEETENED, ETHANOL (ETHYL ALCOHOL)), 3, II

15 법적 규제현황

해당 해당 수송물질을 또는 혼합물에 대한 유해성, 안전성, 환경성 규제를 법률

· Korean Existing Chemical Inventory		
64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	KE-13217
68476-86-8	Petroleum gases, liquefied, sweetened	KE-28192
67-63-0	propan-2-ol	KE-29363
67-56-1	Methyl Alcohol	KE-23193
108-10-1	4-methylpentan-2-one	KE-24725
7782-40-3	diamond natural monocrystalline powder	KE-09834

· **라벨링요소**
본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· **그림문자**



GHS02



GHS06



GHS08

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**
Petroleum gases, liquefied, sweetened
Methyl Alcohol
4-methylpentan-2-one

· **유해성**
고인화성 액체 및 증기
삼키거나 피부에 접촉하거나 흡입하면 유독함.
눈에 심한 자극을 일으킴
유전적인 결함을 일으킬 수 있음

(10 쪽에계속)

안전지침서

제조조의 위험성/2006/EU에 따라라따

기압점: 2015.12.29

개정: 2015.12.29

제품명: DIAMOND AEROSOL SPRAY

(9 쪽부터계속)

압을 일으킬 수 있음

신체 중에 손상을 일으킴

· 예방조치 문구문구

삼켰을 시: 즉시 독성물질센터/병원 연락 필요.

피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 헹구시오.

눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.

(라벨 참조) 처치를 하시오.

잠금장치가 있는 저장장소에 저장 하시오.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 국내규정:

· 사용제한에 대한정보정보

노동자들은이러한예방준비하에압을유발시키는성분을함유한위험물을버리지말아야한다. 개별적인경우에관청은예외를허가할수있다.

· 화학물질 안전성 평가평가 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태대하여평가하고있다, 하지만이보고서는생산특성에관한보증은기술하지않았으며계약적인법률관계에기반을두고있지도않다

최초 최초 작성일자: 2015.12.29

개정 개정 일자: 1 / 2015.12.29

· 약어와 두문자어:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

인화성 가스 구분1: Flammable gases, Hazard Category 1

고압가스(압축가스): Gases under pressure: Compressed gas

인화성 액체 구분1: Flammable liquids, Hazard Category 1

인화성 액체 구분2: Flammable liquids, Hazard Category 2

급성 독성(경구) 구분3: Acute toxicity, Hazard Category 3

급성 독성(경구) 구분4: Acute toxicity, Hazard Category 4

심한 눈 손상/자극성 구분2: Serious eye damage/eye irritation, Hazard Category 2

심한 눈 손상/자극성 구분2: Serious eye damage/eye irritation, Hazard Category 2

생식세포 변이원성 구분1B: Germ cell mutagenicity, Hazard Category 1B

발암성 구분1A: Carcinogenicity, Hazard Category 1A

표적장기-1회노출 구분1: Specific target organ toxicity - Single exposure, Hazard Category 1

표적장기-1회노출 구분3: Specific target organ toxicity - Single exposure, Hazard Category 3

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** DIAMOND AEROSOL SPRAY

· **Número del artículo:** 50374-06, 50374-10, 50374-11, 50374-16, 50374-21, 50374-26, 50374-31

· 1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS02 llama

Flam. Liq. 2 H225 Líquido y vapores muy inflamables.



GHS06 calavera y tibias cruzadas

Acute Tox. 3 H301 Tóxico en caso de ingestión.

Acute Tox. 3 H311 Tóxico en contacto con la piel.

Acute Tox. 3 H331 Tóxico en caso de inhalación.



GHS08 peligro para la salud

Muta. 1B H340 Puede provocar defectos genéticos.

Carc. 1A H350 Puede provocar cáncer.

STOT SE 1 H370 Provoca daños en los órganos.

(se continua en página 2)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: **DIAMOND AEROSOL SPRAY**

(se continua en página 1)



GHS07

Eye Irrit. 2 H319 Provoca irritación ocular grave.

· 2.2 Elementos de la etiqueta

· Etiquetado con arreglo al Reglamento (CE) n° 1272/2008

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· Pictogramas de peligro



GHS02

GHS06

GHS08

· Palabra de advertencia Peligro

· Componentes peligrosos a indicar en el etiquetaje:

gases del petróleo, licuados, desazufrados

metanol

4-metilpentan-2-ona

· Indicaciones de peligro

H225 Líquido y vapores muy inflamables.

H301+H311+H331 Tóxico en caso de ingestión, contacto con la piel o inhalación.

H319 Provoca irritación ocular grave.

H340 Puede provocar defectos genéticos.

H350 Puede provocar cáncer.

H370 Provoca daños en los órganos.

· Consejos de prudencia

P301+P310 EN CASO DE INGESTIÓN: Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/ médico.

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ ducharse.

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.

P321 Se necesita un tratamiento específico (ver en esta etiqueta).

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/ internacional.

· 2.3 Otros peligros

· Resultados de la valoración PBT y mPmB

· PBT: No aplicable.

· mPmB: No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· 3.2 Caracterización química: Mezclas

· Descripción: Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: **DIAMOND AEROSOL SPRAY**

(se continua en página 2)

· Componentes peligrosos:		
CAS: 64-17-5 EINECS: 200-578-6	etanol Flam. Liq. 2, H225	25-50%
CAS: 68476-86-8 EINECS: 270-705-8	gases del petróleo, licuados, desazufrados Flam. Gas 1, H220; Flam. Liq. 1, H224; Muta. 1B, H340; Carc. 1A, H350; Press. Gas C, H280	25-50%
CAS: 67-63-0 EINECS: 200-661-7	2-propanol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 67-56-1 EINECS: 200-659-6	metanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≤ 2,5%
CAS: 108-10-1 EINECS: 203-550-1	4-metilpentan-2-ona Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2,5%
CAS: 7782-40-3 EINECS: 231-953-2	diamond natural monocrystalline powder	≤ 2,5%

· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

SECCIÓN 4: Primeros auxilios

· 4.1 Descripción de los primeros auxilios

· Instrucciones generales:

Quitarse de inmediato toda prenda contaminada con el producto.

Antes de quitarse la protección respiratoria, quítese la ropa contaminada.

En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.

· En caso de inhalación del producto:

Suministrar aire fresco u oxígeno; solicitar ayuda médica.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· En caso de contacto con la piel: Lavar inmediatamente con agua y jabón y enjuagar bien.

· En caso de con los ojos:

Limpia los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.

· En caso de ingestión: No provocar el vómito y solicitar asistencia médica inmediata.

· 4.2 Principales síntomas y efectos, agudos y retardados No existen más datos relevantes disponibles.

· 4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente No existen más datos relevantes disponibles.

SECCIÓN 5: Medidas de lucha contra incendios

· 5.1 Medios de extinción

· **Sustancias extintoras apropiadas:** CO₂, arena, polvo extintor. No utilizar agua.

· **Sustancias extintoras inapropiadas por razones de seguridad:** Agua a pleno chorro

· **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.

· 5.3 Recomendaciones para el personal de lucha contra incendios

· **Equipo especial de protección:** Colocarse la protección respiratoria.

ES

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: **DIAMOND AEROSOL SPRAY**

(se continua en página 3)

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**
Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **6.2 Precauciones relativas al medio ambiente:**
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
Desechar el material contaminado como vertido según item 13.
Asegurar suficiente ventilación.
No enjuagar con agua ni productos de limpieza acuosos.
- **6.4 Referencia a otras secciones**
Ver capítulo 7 para mayor información sobre una manipulación segura.
Ver capítulo 8 para mayor información sobre el equipo personal de protección.
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.
Abrir y manejar el recipiente con cuidado.
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:**
Mantener alejadas las fuentes de encendido. No fumar.
Proteger del calor.
Tomar medidas contra las cargas electrostáticas.
Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** Almacenar en un lugar fresco.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
Almacenarlo en envases bien cerrados en un lugar fresco y seco.
Proteger del calor y de la luz directa del sol.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

· 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

64-17-5 etanol

LEP	Valor de corta duración: 1910 mg/m ³ , 1000 ppm
s	

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: **DIAMOND AEROSOL SPRAY**

(se continua en página 4)

67-63-0 2-propanol

LEP Valor de corta duración: 1000 mg/m³, 400 ppm
 Valor de larga duración: 500 mg/m³, 200 ppm
 VLB, s

67-56-1 metanol

LEP Valor de larga duración: 266 mg/m³, 200 ppm
 vía dérmica, VLB, VLI

108-10-1 4-metilpentan-2-ona

LEP Valor de corta duración: 208 mg/m³, 50 ppm
 Valor de larga duración: 83 mg/m³, 20 ppm
 VLB, VLI

· **Componentes con valores límite biológicos:****67-63-0 2-propanol**

VLB 40 mg/l
 Muestra: orina
 Momento de Muestero: Final de la semana laboral
 Indicador Biológico: Acetona

67-56-1 metanol

VLB 15 mg/l
 Muestra: orina
 Momento de Muestero: Final de la jornada laboral
 Indicador Biológico: Metanol

108-10-1 4-metilpentan-2-ona

VLB 1 mg/l
 Muestra: orina
 Momento de Muestero: Final de la jornada laboral
 Indicador Biológico: Metilisobutilcetona

· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.· **8.2 Controles de la exposición**· **Equipo de protección individual:**· **Medidas generales de protección e higiene:**

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

Guardar la ropa protectora por separado.

Evitar el contacto con los ojos.

Evitar el contacto con los ojos y la piel.

· **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

· **Protección de manos:**

Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: **DIAMOND AEROSOL SPRAY**

(se continua en página 5)

· **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· **Protección de ojos:**



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**

· **Datos generales**

· **Aspecto:**

Forma: Aerosol
Color: Según denominación del producto

· **Olor:** Característico

· **Umbral olfativo:** No determinado.

· **valor pH:** No determinado.

· **Cambio de estado**

Punto de fusión /campo de fusión: Indeterminado.

Punto de ebullición /campo de ebullición: 77 °C

· **Punto de inflamación:** -88 °C

· **Inflamabilidad (sólido, gaseiforme):** No aplicable.

· **Temperatura de ignición:** 425 °C

· **Temperatura de descomposición:** No determinado.

· **Autoinflamabilidad:** El producto no es autoinflamable.

· **Peligro de explosión:** El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.

· **Límites de explosión:**

Inferior: 2.0 Vol %

Superior: 15.0 Vol %

· **Presión de vapor a 20 °C:** 59 hPa

· **Densidad:** Indeterminado.

· **Densidad relativa** No determinado.

· **Densidad de vapor** No determinado.

· **Velocidad de evaporación** No determinado.

· **Solubilidad en / miscibilidad con agua:**

Poco o no mezclable.

· **Coefficiente de reparto (n-octanol/agua):** No determinado.

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: **DIAMOND AEROSOL SPRAY**

(se continua en página 6)

- **Viscosidad:**
 - Dinámica:** No determinado.
 - Cinemática:** No determinado.
- **Concentración del disolvente:**
 - Disolventes orgánicos:** 64.0 %
 - VOC (CE)** 64,00 %
- **9.2 Otros datos** No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**
Tóxico en caso de ingestión, contacto con la piel o inhalación.

- **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

67-56-1 metanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**
Provoca irritación ocular grave.
- **Sensibilización respiratoria o cutánea**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
Puede provocar defectos genéticos.
- **Carcinogenicidad**
Puede provocar cáncer.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
Provoca daños en los órganos.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

ES

(se continua en página 8)

Ficha de datos de seguridad
según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: DIAMOND AEROSOL SPRAY

(se continua en página 7)


SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 3 (autoclasiicación): muy peligroso para el agua
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados, ni siquiera en pequeñas cantidades.
Una cantidad ínfima vertida en el subsuelo ya representa un peligro para el agua potable.
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN1992
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 1992 LÍQUIDO INFLAMABLE, TÓXICO, N.E.P. (gases del petróleo, licuados, desazufrados, ETANOL (ALCOHOL ETÍLICO))
- **IMDG** FLAMMABLE LIQUID, TOXIC, N.O.S. (Petroleum gases, liquefied, sweetened, ETHANOL (ETHYL ALCOHOL))
- **IATA** Flammable liquids, toxic, n.o.s. (Petroleum gases, liquefied, sweetened, Ethanol)
- **14.3 Clase(s) de peligro para el transporte**
- **ADR, IMDG, IATA**
- 
- **Clase** 3 Líquidos inflamables
- **Etiqueta** 3
- **14.4 Grupo de embalaje**
- **ADR, IMDG, IATA** II

(se continua en página 9)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: **DIAMOND AEROSOL SPRAY**

(se continua en página 8)

· 14.5 Peligros para el medio ambiente:	No aplicable.
· 14.6 Precauciones particulares para los usuarios	Atención: Líquidos inflamables
· Número Kemler:	33
· Número EMS:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC	No aplicable.
· Transporte/datos adicionales:	
· ADR	
· Cantidades limitadas (LQ)	1L
· Cantidades exceptuadas (EQ)	Código: E2 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 500 ml
· Categoría de transporte	2
· Código de restricción del túnel	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· "Reglamentación Modelo" de la UNECE:	UN 1992 LÍQUIDO INFLAMABLE, TÓXICO, N.E.P. (GASES DEL PETRÓLEO, LICUADOS, DESAZUFRADOS, ETANOL (ALCOHOL ETÍLICO)), 3, II

SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I metanol**
- **Categoría Seveso**
H2 TOXICIDAD AGUDA
P5c LÍQUIDOS INFLAMABLES
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 50 t**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 200 t**
- **Disposiciones nacionales:**
- **Indicaciones sobre las limitaciones de trabajo:**
Los empleados no deben exponerse a las sustancias cancerígenas contenidas en el producto. En casos aislados las autoridades pueden hacer excepciones.
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

(se continua en página 10)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 29.12.2015

Revisión: 29.12.2015

Nombre comercial: DIAMOND AEROSOL SPRAY

(se continua en página 9)

· **Frases relevantes**

- H220 Gas extremadamente inflamable.
- H224 Líquido y vapores extremadamente inflamables.
- H225 Líquido y vapores muy inflamables.
- H280 Contiene gas a presión; peligro de explosión en caso de calentamiento.
- H302 Nocivo en caso de ingestión.
- H312 Nocivo en contacto con la piel.
- H315 Provoca irritación cutánea.
- H319 Provoca irritación ocular grave.
- H332 Nocivo en caso de inhalación.
- H335 Puede irritar las vías respiratorias.
- H336 Puede provocar somnolencia o vértigo.
- H340 Puede provocar defectos genéticos.
- H350 Puede provocar cáncer.
- H370 Provoca daños en los órganos.

· **Abreviaturas y acrónimos:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases, Hazard Category 1
- Press. Gas C: Gases under pressure: Compressed gas
- Flam. Liq. 1: Flammable liquids, Hazard Category 1
- Flam. Liq. 2: Flammable liquids, Hazard Category 2
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
- Carc. 1A: Carcinogenicity, Hazard Category 1A
- STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3