

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

1 Identification

- **Product identifier**
- **Trade name:** BISMUTH STAIN KIT 3
- **Article number:** 11436
- **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**



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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



GHS05



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
disodium tartrate
Sodium Hydroxide, Pellets, Reagent, A.C.S.
Ethyl alcohol
orthoperiodic acid

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 1)

- **Hazard statements**

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause cancer.

- **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dusts or mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a poison center/doctor.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

- **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	>10-≤25%
868-18-8	disodium tartrate	>10-≤25%
1310-73-2	Sodium Hydroxide, Pellets, Reagent, A.C.S.	>10-≤25%
10450-60-9	orthoperiodic acid	>10-≤25%

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: BISMUTH STAIN KIT 3

(Contd. of page 2)

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** 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. Then consult a doctor.

- **After swallowing:**

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

- **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:** Use fire fighting measures that suit the environment.

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

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

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).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **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.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

64-17-5	Ethyl alcohol	1,800 ppm
127-09-3	sodium acetate	11 mg/m ³
1310-73-2	Sodium Hydroxide, Pellets, Reagent, A.C.S.	0.5 mg/m ³
10450-60-9	orthoperiodic acid	0.18 mg/m ³

- **PAC-2:**

64-17-5	Ethyl alcohol	3300* ppm
127-09-3	sodium acetate	120 mg/m ³

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 3)

1310-73-2	Sodium Hydroxide, Pellets, Reagent, A.C.S.	5 mg/m ³
10450-60-9	orthoperiodic acid	2.1 mg/m ³
· PAC-3:		
64-17-5	Ethyl alcohol	15000* ppm
127-09-3	sodium acetate	700 mg/m ³
1310-73-2	Sodium Hydroxide, Pellets, Reagent, A.C.S.	50 mg/m ³
10450-60-9	orthoperiodic acid	12 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

64-17-5 Ethyl alcohol

PEL	Long-term value: 1900 mg/m ³ , 1000 ppm
REL	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1000 ppm
A3	

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.

PEL	Long-term value: 2 mg/m ³
REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

- **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.
Avoid contact with the eyes.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 4)

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:	Fluid
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:	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not flammable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 5)

· Vapor pressure:	Not determined.
· 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:	17.1 %
VOC content:	17.10 %
	171.0 g/l / 1.43 lb/gal
Solids content:	0.0 %
· 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.

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:		
1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.		
Oral	LD50	2,000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 6)

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

64-17-5 Ethyl alcohol

I

· **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 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **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**· **DOT, ADR, IMDG, IATA**

UNI760

· **UN proper shipping name**· **DOT**· **ADR**· **IMDG, IATA**

Corrosive liquids, n.o.s. (Sodium hydroxide)

1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)

CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)

(Contd. on page 8)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: BISMUTH STAIN KIT 3

(Contd. of page 7)

· **Transport hazard class(es)**· **DOT**

· **Class** 8 Corrosive substances
 · **Label** 8

· **ADR, IMDG, IATA**

· **Class** 8 Corrosive substances
 · **Label** 8

· **Packing group**· **DOT, ADR, IMDG, IATA** II· **Environmental hazards:** Not applicable.· **Special precautions for user** Warning: Corrosive substances· **Hazard identification number (Kemler code):** 80· **EMS Number:** F-A,S-B· **Segregation groups** Alkalis· **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.

· **Transport/Additional information:**· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 1 L
 On cargo aircraft only: 30 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 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE), 8, II

US

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 8)

15 Regulatory information

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

No further relevant information available.

- **Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **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

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value)**

64-17-5 Ethyl alcohol

A3

- **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**



GHS05

GHS07

GHS08

- **Signal word** Danger

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

disodium tartrate

Sodium Hydroxide, Pellets, Reagent, A.C.S.

Ethyl alcohol

orthoperiodic acid

- **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause cancer.

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: BISMUTH STAIN KIT 3

(Contd. of page 9)

· **Precautionary statements**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dusts or mists.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- If swallowed: Rinse mouth. Do NOT induce vomiting.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a poison center/doctor.
- IF exposed or concerned: Get medical advice/attention.
- Specific treatment (see on this label).
- Wash contaminated clothing before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- **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.

· **Contact:**

· **Date of preparation / last revision** 01/05/2022 / -

· **Abbreviations and acronyms:**

- ADR: Accord relatif au transport international 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
- 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**
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1A: Skin corrosion/irritation – Category 1A
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Carc. 1A: Carcinogenicity – Category 1A

Safety Data Sheet

according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

1 Identification

- **Product identifier**
- **Trade name:** BISMUTH STAIN KIT 3
- **Article number:** 11436
- **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)
Website: ems.proscitech.com
- 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 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS08 health hazard

Carc. 1A H350 May cause cancer.



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

(Contd. on page 2)

Safety Data Sheet

according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 1)

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



GHS05 GHS07 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
disodium tartrate
Sodium Hydroxide, Pellets, Reagent, A.C.S.
Ethyl alcohol
orthoperiodic acid
- **Hazard statements**
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause cancer.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dusts or mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a POISON CENTER/doctor.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Store locked up.
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 and Information on Ingredients

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

- **Dangerous components:**

64-17-5	<i>Ethyl alcohol</i>	<i>>10- ≤25%</i>
868-18-8	<i>disodium tartrate</i>	<i>>10- ≤25%</i>
1310-73-2	<i>Sodium Hydroxide, Pellets, Reagent, A.C.S.</i>	<i>>10- ≤25%</i>

(Contd. on page 3)

Safety Data Sheet according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 2)

10450-60-9 orthoperiodic acid

>10-≤25%

· **SVHC**

64-17-5 Ethyl alcohol

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

4 First Aid Measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** 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. Then consult a doctor.

- **After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor 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.

5 Fire Fighting Measures

- **Extinguishing media**

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

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

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

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).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **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.

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(Contd. on page 4)

Safety Data Sheet

according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 3)

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

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

64-17-5 Ethyl alcohol

WES	Long-term value: 1880 mg/m ³ , 1000 ppm
-----	--

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.

WES	Peak limitation: 2 mg/m ³
-----	--------------------------------------

- **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.
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.

(Contd. on page 5)

Safety Data Sheet

according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 4)

- **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:**

Fluid

- **Colour:**

According to product specification

- **Odour:**

Characteristic

- **Odour threshold:**

Not determined.

- **pH-value:**

Not determined.

- **Change in condition**

- **Melting point/freezing point:**

Undetermined.

- **Initial boiling point and boiling range:**

Undetermined.

- **Flash point:**

Not applicable.

- **Flammability (solid, gas):**

Not applicable.

- **Decomposition temperature:**

Not determined.

- **Auto-ignition temperature:**

Product is not selfigniting.

- **Explosive properties:**

Product does not present an explosion hazard.

- **Explosion limits:**

- **Lower:**

Not determined.

- **Upper:**

Not determined.

- **Vapour pressure:**

Not determined.

- **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:**

17.1 %

- **VOC (EC)**

17.10 %

(Contd. on page 6)

Safety Data Sheet

according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 5)

Solids content:	0.0 %
------------------------	-------

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.

11 Toxicological Information

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

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

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.	
Oral	LD50 2,000 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **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:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Carc. IA

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 2 (German Regulation) (Self-assessment): hazardous for water

(Contd. on page 7)

Safety Data Sheet according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 6)

Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.


· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **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	UNI760
· UN proper shipping name · ADG · IMDG, IATA	1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE) CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)
· Transport hazard class(es) · ADG, IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· Packing group · ADG, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Stowage Code	Warning: Corrosive substances. 80 F-A,S-B Alkalis B SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

(Contd. on page 8)

AU

Safety Data Sheet

according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 7)

· **Transport/Additional information:**

· **ADG**

· **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

· **Transport category**

2

· **Tunnel restriction code**

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 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE), 8, II

15 Regulatory information

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

· **Australian Inventory of Industrial Chemicals**

All ingredients are listed.

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

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.

S5, S6, S10

· **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS05



GHS07



GHS08

· **Signal word** Danger

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

disodium tartrate

Sodium Hydroxide, Pellets, Reagent, A.C.S.

Ethyl alcohol

orthoperiodic acid

· **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

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

Do not breathe dusts or mists.

Wash thoroughly after handling.

(Contd. on page 9)

AU

Safety Data Sheet

according to WHS Regulations

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: BISMUTH STAIN KIT 3

(Contd. of page 8)

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

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

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

Continue rinsing.

Immediately call a POISON CENTER/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store locked up.

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

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

64-17-5	Ethyl alcohol
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· **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.

· **Contact:**

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Carc. 1A: Carcinogenicity – Category 1A

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

1 Identification

- **Product identifier**
- **Trade name:** BISMUTH STAIN KIT 3
- **Article number:** 11436
- **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 identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carcinogenicity - Category 1A H350 May cause cancer.



GHS05 Corrosion

Skin Corrosion - Category 1A H314 Causes severe skin burns and eye damage.

Serious Eye Damage - Category 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.

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



GHS05



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
 disodium tartrate
 Sodium Hydroxide, Pellets, Reagent, A.C.S.
 Ethyl alcohol
 orthoperiodic acid

(Contd. on page 2)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 1)

- **Hazard statements**

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause cancer.

- **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a poison center/doctor.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

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	10-30% w/w *
868-18-8	disodium tartrate	10-30% w/w *
1310-73-2	Sodium Hydroxide, Pellets, Reagent, A.C.S.	10-30% w/w *
10450-60-9	orthoperiodic acid	10-30% w/w *

* Actual concentration ranges are withheld as a trade secret.

CA

(Contd. on page 3)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 2)

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** 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. Then consult a doctor.

- **After swallowing:**

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

- **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:** Use fire fighting measures that suit the environment.

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

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

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).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **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.

Prevent formation of aerosols.

- **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 3)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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

EL STEL: 1000 ppm

EV TWA: 1,900 mg/m³, 1,000 ppm

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.

EL Ceiling: 2 mg/m³EV Ceiling: 2 mg/m³

- **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.

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.

(Contd. on page 5)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

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

· Form:	Fluid
· 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:	Undetermined.

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not flammable.· **Decomposition temperature:** Not determined.· **Auto igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapor pressure:** Not determined.· **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:** 17.1 %· **Solids content:** 0.0 %

(Contd. on page 6)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 5)

· **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 that are relevant for classification:**

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.

Oral	LD50	2,000 mg/kg (rat)
------	------	-------------------

· **Primary irritant effect:**

· **on the skin:** Strong caustic effect on skin and mucous membranes.

· **on the eye:**

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

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

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

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

64-17-5	Ethyl alcohol	I
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· **NTP (National Toxicology Program)**

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.

(Contd. on page 7)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**



(Contd. of page 6)

- **Additional ecological information:**
- **General notes:**
*Water hazard class 2 (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 Danger to drinking water if even small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **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 | UN1760 |
| · DOT/TDG, ADR, IMDG, IATA | |
| · UN proper shipping name | Corrosive liquids, n.o.s. (Sodium hydroxide) |
| · DOT/TDG | 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE) |
| · ADR | CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE) |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT/TDG (Transport dangerous goods): | |
|  | |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| | |
| · ADR, IMDG, IATA | |
|  | |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| · Packing group | II |
| · DOT/TDG, ADR, IMDG, IATA | |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Corrosive substances |

(Contd. on page 8)

-CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 7)

· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis
· 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.
· Transport/Additional information:	
· DOT/TDG	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 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 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE), 8, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

· **Canadian substance listings:**

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

All ingredients are listed.

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

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

64-17-5 Ethyl alcohol

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

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.

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

(Contd. on page 9)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 8)

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** *Danger*

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

disodium tartrate
Sodium Hydroxide, Pellets, Reagent, A.C.S.
Ethyl alcohol
orthoperiodic acid

· **Hazard statements**

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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.

· **Contact:**

· **Date of the latest revision of the safety data sheet** 01/05/2022 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

(Contd. on page 10)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 01/05/2022

Reviewed on 01/05/2022

Trade name: BISMUTH STAIN KIT 3

PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

(Contd. of page 9)

CA

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

Printing date 05.01.2022

Revision: 05.01.2022

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

- **1.1 Product identifier**
- **Trade name:** BISMUTH STAIN KIT 3
- **Article number:** 11436
- **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**



corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

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



GHS05

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Sodium Hydroxide, Pellets, Reagent, A.C.S.
orthoperiodic acid
- **Hazard statements**
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
- P310 Immediately call a POISON CENTER/doctor.
- P321 Specific treatment (see on this label).

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: BISMUTH STAIN KIT 3

(Contd. of page 1)

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 ⚠ Flam. Liq. 2, H225	>10-≤25%
CAS: 868-18-8 EINECS: 212-773-3	disodium tartrate ⚠ Acute Tox. 4, H302	>10-≤25%
CAS: 1310-73-2 EINECS: 215-185-5	Sodium Hydroxide, Pellets, Reagent, A.C.S. ⚠ Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	>10-≤25%
CAS: 10450-60-9 EINECS: 233-937-0	orthoperiodic acid ⚠ Ox. Sol. 2, H272; ⚠ Skin Corr. 1B, H314	>10-≤25%

· SVHC

64-17-5	Ethyl alcohol
---------	---------------

- Additional information: For the wording of the listed hazard 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.
 - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation: 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. Then consult a doctor.
- After swallowing:
 - Call for a doctor immediately.
 - Drink plenty of water and provide fresh air. Call for a doctor 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: Use fire extinguishing methods suitable to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 2)

- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

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).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

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

64-17-5 Ethyl alcohol

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

1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.

WEL Short-term value: 2 mg/m³

- **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.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 3)

- **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:	Fluid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gas):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

(Contd. on page 5)

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

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 4)

· Vapour pressure:	Not determined.
· 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:	17.1 %
VOC (EC)	17.10 %
Solids content:	0.0 %
· 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** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:		
1310-73-2 Sodium Hydroxide, Pellets, Reagent, A.C.S.		
Oral	LD50	2,000 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.

(Contd. on page 6)

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

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 5)

- **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 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even 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.

SECTION 14: Transport information

- | | |
|--|---|
| · 14.1 UN-Number | |
| · ADR, IMDG, IATA | UN1760 |
| · 14.2 UN proper shipping name | |
| · ADR | 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE) |
| · IMDG, IATA | CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE) |
| · 14.3 Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
| |  |
| · Class | 8 Corrosive substances. |
| · Label | 8 |
| · 14.4 Packing group | |
| · ADR, IMDG, IATA | II |

(Contd. on page 7)

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

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: **BISMUTH STAIN KIT 3**

(Contd. of page 6)

· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis
· Stowage Category	B
· Stowage Code	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)	1L
· 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	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 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE), 8, II

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** None of the ingredients is listed.
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

64-17-5 Ethyl alcohol

- **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**
- H225 Highly flammable liquid and vapour.
- H272 May intensify fire; oxidiser.
- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.

(Contd. on page 8)

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

Printing date 05.01.2022

Revision: 05.01.2022

Trade name: BISMUTH STAIN KIT 3

(Contd. of page 7)

*H318 Causes serious eye damage.***Abbreviations and acronyms:***ADR: Accord relatif au transport international 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**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids – Category 2**Ox. Sol. 2: Oxidizing solids – Category 2**Met. Corr. 1: Corrosive to metals – Category 1**Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1A: Skin corrosion/irritation – Category 1A**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

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

- **1.1 Productidentificatie**
- **Handelsnaam:** BISMUTH STAIN KIT 3
- **Artikelnummer:** 11436
- **UFI:** N0R1-H0WR-P00U-WS4Y
- **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 verstreker 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**



GHS05 corrosie

Skin Corr. 1A H314 Veroorzaakt ernstige brandwonden en oogletsel.
Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**
Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.
- **Gevarenpictogrammen**



GHS05

- **Signaalwoord** Gevaar
- **Gevaaraanduidende componenten voor de etikettering:**
natriumhydroxide
orthoperjoodzuur

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 1)

- **Gevarenaanduidingen**

H314 Veroorzaakt ernstige brandwonden en oogletsel.

- **Veiligheidsaanbevelingen**

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

Huid met water afspoelen [of afdouchen].

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

P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.

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	>10-≤25%
EINECS: 200-578-6	☠ Flam. Liq. 2, H225	
CAS: 868-18-8	dinatriumtartraat	>10-≤25%
EINECS: 212-773-3	⚠ Acute Tox. 4, H302	
CAS: 1310-73-2	natriumhydroxide	>10-≤25%
EINECS: 215-185-5	⚠ Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	
CAS: 10450-60-9	orthoperjoodzuur	>10-≤25%
EINECS: 233-937-0	⚠ Ox. Sol. 2, H272; ⚠ Skin Corr. 1B, H314	

- **SVHC**

64-17-5 ethanol

- **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.

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

- **Na het inademen:** Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

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

- **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.

- **Na inslikken:**

Onmiddellijk arts raadplegen.

Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.

- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 2)

- **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:** Brandblusmaatregelen op omgeving afstemmen.
- **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:** Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermingsmiddelen en noodprocedures**
Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.
- **6.2 Milieuvorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 InsluTINGS- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
Neutralisatiemiddel gebruiken.
Besmet materiaal zoals afval volgens punt 13 verwijderen.
Voor voldoende ventilatie zorgen.
- **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.
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

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

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

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 3)

- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
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 chemicaliënmengsel 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:	Vloeibaar
Kleur:	Volgens de produktbeschrijving
- **Geur:** Karakteristiek
- **Geurdrempelwaarde:** Niet bepaald.
- **pH-waarde:** Niet bepaald.
- **Toestandsverandering**

Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	Niet bepaald.
- **Vlampunt:** Niet bruikbaar.
- **Ontvlambaarheid (vast, gas):** Niet bruikbaar.

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 4)

· Ontledingstemperatuur:	Niet bepaald.
· Zelfontbrandingstemperatuur:	Het produkt ontbrandt niet uit zichzelf.
· Ontploffingseigenschappen:	Het produkt is niet ontploffingsgevaarlijk.
· Ontploffingsgrenzen:	
Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.
· Dampspanning:	Niet bepaald.
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:	17,1 %
VOC (EG)	17,10 %
Gehalte aan vaste bestanddelen:	0,0 %
· 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** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· Indelingsrelevantie LD/LC50-waarden:

1310-73-2 natriumhydroxide

Oraal	LD50	2.000 mg/kg (rat)
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- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**
Veroorzaakt ernstige brandwonden en oogletsel.

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 5)

- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstig oogletsel.
- **Sensibilisatie van de luchtwegen/de huid**
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Aanvullende toxicologische informatie:**
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **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): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)
Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water
Niet lozen in grondwater, in oppervlaktewater of in riolering.
Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.
Gevaar voor drinkwater zelfs bij uitlopen van 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** UNI760
- **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
- **ADR** 1760 BIJTENDE VLOEISTOF, N.E.G.
(NATRIUMHYDROXIDE)
- **IMDG, IATA** CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 6)

· **14.3 Transportgevaarenklasse(n)**

· **ADR, IMDG, IATA**



· **klasse** 8 Bijtende stoffen
 · **Etiket** 8

· **14.4 Verpakkingsgroep:**

· **ADR, IMDG, IATA** II

· **14.5 Milieugevaaren:** Niet bruikbaar.

· **14.6 Bijzondere voorzorgen voor de gebruiker** Waarschuwing: Bijtende stoffen
 · **Gevaarsidentificatienummer (Kemler-getal):** 80
 · **EMS-nummer:** F-A,S-B
 · **Segregation groups** Alkalis
 · **Stowage Category** B
 · **Stowage Code** 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)** 1L
 · **Uitgezonderde hoeveelheden (EQ)** Code: E2
 Grootste netto hoeveelheid per binnenverpakking: 30 ml
 Grootste netto hoeveelheid per buitenverpakking: 500 ml
 · **Vervoerscategorie** 2
 · **Tunnelbeperkingscode** 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

· **VN "Model Regulation":** UN 1760 BIJTENDE VLOEISTOF, N.E.G. (NATRIUMHYDROXIDE), 8, 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
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· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

64-17-5	ethanol
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IA

(Vervolg op blz. 8)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 7)

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling	
64-17-5	ethanol
IA	

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding	
64-17-5	ethanol
x	

· Lijst Zeer Zorgwekkende Stoffen (ZZS)	
geen der bestanddelen staat op de lijst.	

· Lijst van Potentieel Zeer Zorgwekkende Stoffen	
geen der bestanddelen staat op de lijst.	

· Richtlijn 2012/18/EU	
-------------------------------	--

· Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I geen der bestanddelen staat op de lijst.	
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· Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden: 3	
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· Richtlijn 2011/65/EU betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur - Bijlage II	
--	--

geen der bestanddelen staat op de lijst.	
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· VERORDENING (EU) 2019/1148	
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· Bijlage I - PRECURSOREN VOOR EXPLOSIEVEN WAARVOOR EEN BEPERKING GELDT (Bovengrenswaarde ten behoeve van vergunningverlening op grond van artikel 5, lid 3)	
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geen der bestanddelen staat op de lijst.	
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· Bijlage II - PRECURSOREN VOOR EXPLOSIEVEN DIE MOETEN WORDEN GEMELD	
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geen der bestanddelen staat op de lijst.	
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· Verordening (EG) nr. 273/2004 inzake drugsprecursoren	
--	--

geen der bestanddelen staat op de lijst.	
--	--

· Verordening (EG) Nr. 111/2005 houdende voorschriften voor het toezicht op de handel tussen de Gemeenschap en derde landen in drugsprecursoren	
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geen der bestanddelen staat op de lijst.	
--	--

· Nationale voorschriften:	
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· Gevaarklasse v. water:	
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Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)	
---	--

· Aanvullende voorschriften, beperkingen en verbodsverordeningen	
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· Zeer zorgwekkende stoffen (SVHC) volgens REACH, artikel 57	
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64-17-5	ethanol
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· 15.2 Chemischeveiligheidsbeoordeling: Een chemische veiligheidsbeoordeling is niet uitgevoerd.	
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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	
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H225 Licht ontvlambare vloeistof en damp.	
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H272 Kan brand bevorderen; oxiderend.	
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H290 Kan bijtend zijn voor metalen.	
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H302 Schadelijk bij inslikken.	
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H314 Veroorzaakt ernstige brandwonden en oogletsel.	
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H318 Veroorzaakt ernstig oogletsel.	
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(Vervolg op blz. 9)

Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31

datum van de druk: 05.01.2022

Herziening van: 05.01.2022

Handelsnaam: BISMUTH STAIN KIT 3

(Vervolg van blz. 8)

Afkortingen en acroniemen:

ADR: Accord relatif au transport international 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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2

Ox. Sol. 2: Oxiderende vaste stoffen – Categorie 2

Met. Corr. 1: Bijtend voor metalen – Categorie 1

Acute Tox. 4: Acute toxiciteit – Categorie 4

Skin Corr. 1A: Huidcorrosie/-irritatie – Categorie 1A

Skin Corr. 1B: Huidcorrosie/-irritatie – Categorie 1B

Eye Dam. 1: Ernstig oogletsel/oogirritatie – Categorie 1

NL

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 05.01.2022

Révision: 05.01.2022

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

- **1.1 Identificateur de produit**
- **Nom du produit:** BISMUTH STAIN KIT 3
- **Code du produit:** 11436
- **UFI:** N0R1-H0WR-P00U-WS4Y
- **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**



GHS05 corrosion

Skin Corr. 1A H314 Provoque de graves brûlures de la peau et de graves lésions des yeux.
Eye Dam. 1 H318 Provoque de graves lésions 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.
- **Pictogrammes de danger**



GHS05

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**
hydroxyde de sodium
acide orthoperiodique
- **Mentions de danger**
H314 Provoque de graves brûlures de la peau et de graves lésions des yeux.
- **Conseils de prudence**
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 [ou 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.
P310 Appeler immédiatement un CENTRE ANTIPOISON/un médecin.

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: BISMUTH STAIN KIT 3

(suite de la page 1)

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	>10-≤25%
CAS: 868-18-8 EINECS: 212-773-3	tartrate de disodium Acute Tox. 4, H302	>10-≤25%
CAS: 1310-73-2 EINECS: 215-185-5	hydroxyde de sodium Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	>10-≤25%
CAS: 10450-60-9 EINECS: 233-937-0	acide orthoperiodique Ox. Sol. 2, H272; Skin Corr. 1B, H314	>10-≤25%

- **SVHC**

64-17-5	éthanol
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- **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.
Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.
- **Après inhalation:** 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 et consulter un médecin.
- **Après ingestion:**
Consulter immédiatement un médecin.
Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement un médecin.
- **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.

FR

(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: BISMUTH STAIN KIT 3

(suite de la page 2)

RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.
- **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:** Aucune mesure particulière n'est requise.

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).
Utiliser un neutralisant.
Évacuer les matériaux contaminés en tant que déchets conformément au point 13.
Assurer une aération suffisante.
- **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.
Éviter la formation d'aérosols.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **8.1 Paramètres de contrôle**
- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.
- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

64-17-5 éthanol

VLEP	Valeur momentanée: 9500 mg/m ³ , 5000 ppm
	Valeur à long terme: 1900 mg/m ³ , 1000 ppm

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: BISMUTH STAIN KIT 3

(suite de la page 3)

1310-73-2 hydroxyde de sodium

VLEP Valeur à long terme: 2 mg/m³

· **Remarques supplémentaires:**

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

· **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.

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:

Liquide

Couleur:

Selon désignation produit

· **Odeur:**

Caractéristique

· **Seuil olfactif:**

Non déterminé.

· **valeur du pH:**

Non déterminé.

· **Changement d'état**

Point de fusion/point de congélation:

Non déterminé.

(suite page 5)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: **BISMUTH STAIN KIT 3**

(suite de la page 4)

Point initial d'ébullition et intervalle d'ébullition:	Non déterminé.
· Point d'éclair	Non applicable.
· Inflammabilité (solide, gaz):	Non applicable.
· Température de décomposition:	Non déterminé.
· Température d'auto-inflammabilité:	Le produit ne s'enflamme pas spontanément.
· Propriétés explosives:	Le produit n'est pas explosif.
· Limites d'explosion:	
Inférieure:	Non déterminé.
Supérieure:	Non déterminé.
· Pression de vapeur:	Non déterminé.
· Densité:	Non déterminée.
· Densité relative	Non déterminé.
· Densité de vapeur:	Non déterminé.
· Taux 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:	17,1 %
VOC (CE)	17,10 %
Teneur en substances solides:	0,0 %
· 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** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **Valeurs LD/LC50 déterminantes pour la classification:**

1310-73-2 hydroxyde de sodium

Oral	LD50	2.000 mg/kg (rat)
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(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: BISMUTH STAIN KIT 3

(suite de la page 5)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque de graves brûlures de la peau et de graves lésions des yeux.
- **Lésions oculaires graves/irritation oculaire**
Provoque de graves lésions des yeux.
- **Sensibilisation respiratoire ou cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Indications toxicologiques complémentaires:**
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagenicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **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**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **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 2 (D) (Classification propre): polluant
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.
Ne doit pas pénétrer à l'état non dilué ou non neutralisé dans les eaux usées ou le collecteur.
Danger pour l'eau potable dès fuite d'une petite quantité 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** UN1760

(suite page 7)

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

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: **BISMUTH STAIN KIT 3**

(suite de la page 6)

<ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG, IATA 	<p>1760 LIQUIDE CORROSIF, N.S.A. (HYDROXYDE DE SODIUM) CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)</p>
<ul style="list-style-type: none"> · 14.3 Classe(s) de danger pour le transport · ADR, IMDG, IATA 	
<ul style="list-style-type: none"> · Classe · Étiquette 	<p>8 Matières corrosives. 8</p>
<ul style="list-style-type: none"> · 14.4 Groupe d'emballage · ADR, IMDG, IATA 	<p>II</p>
<ul style="list-style-type: none"> · 14.5 Dangers pour l'environnement: 	<p>Non applicable.</p>
<ul style="list-style-type: none"> · 14.6 Précautions particulières à prendre par l'utilisateur · Numéro d'identification du danger (Indice Kemler): · No EMS: · Segregation groups · Stowage Category · Stowage Code 	<p>Attention: Matières corrosives. 80 F-A,S-B Alkalis B SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> · 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC 	<p>Non applicable.</p>
<ul style="list-style-type: none"> · Indications complémentaires de transport: 	
<ul style="list-style-type: none"> · ADR · Quantités limitées (LQ) · Quantités exceptées (EQ) 	<p>1L Code: E2 Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 500 ml</p>
<ul style="list-style-type: none"> · Catégorie de transport · Code de restriction en tunnels 	<p>2 E</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · "Règlement type" de l'ONU: 	<p>UN 1760 LIQUIDE CORROSIF, N.S.A. (HYDROXYDE DE SODIUM), 8, II</p>

FR

(suite page 8)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: **BISMUTH STAIN KIT 3**

(suite de la page 7)

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** Aucun des composants n'est compris.

· **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3

· **Directive 2011/65/UE relative à la limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques – Annexe II**

Aucun des composants n'est compris.

· **RÈGLEMENT (UE) 2019/1148**

· **Annexe I - PRÉCURSEURS D'EXPLOSIFS FAISANT L'OBJET DE RESTRICTIONS (Valeur limite maximale aux fins de l'octroi d'une licence en vertu de l'article 5, paragraphe 3)**

Aucun des composants n'est compris.

· **Annexe II - PRÉCURSEURS D'EXPLOSIFS DEVANT FAIRE L'OBJET D'UN SIGNALEMENT**

Aucun des composants n'est compris.

· **Règlement (CE) n° 273/2004 relatif aux précurseurs de drogues**

Aucun des composants n'est compris.

· **Règlement (CE) n° 111/2005 fixant des règles pour la surveillance du commerce des précurseurs des drogues entre la Communauté et les pays tiers**

Aucun des composants n'est compris.

· **Prescriptions nationales:**

· **Autres prescriptions, restrictions et règlements d'interdiction**

· **Substances extrêmement préoccupantes (SVHC) selon REACH, article 57**

64-17-5 | éthanol

· **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**

H225 Liquide et vapeurs très inflammables.

H272 Peut aggraver un incendie; comburant.

H290 Peut être corrosif pour les métaux.

H302 Nocif en cas d'ingestion.

H314 Provoque de graves brûlures de la peau et de graves lésions des yeux.

H318 Provoque de graves lésions des yeux.

· **Acronymes et abréviations:**

ADR: Accord relatif au transport international 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

(suite page 9)

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

Date d'impression : 05.01.2022

Révision: 05.01.2022

Nom du produit: BISMUTH STAIN KIT 3

(suite de la page 8)

*SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Liquides inflammables – Catégorie 2**Ox. Sol. 2: Matières solides comburantes – Catégorie 2**Met. Corr.1: Substances ou mélanges corrosifs pour les métaux – Catégorie 1**Acute Tox. 4: Toxicité aiguë – Catégorie 4**Skin Corr. 1A: Corrosion cutanée/irritation cutanée – Catégorie 1A**Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B**Eye Dam. 1: Lésions oculaires graves/irritation oculaire – Catégorie 1*

FR

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

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

- **1.1 Produktidentifikator**
- **Handelsname:** **BISMUTH STAIN KIT 3**
- **Artikelnummer:** 11436
- **UFI:** NORI-HOWR-P00U-WS4Y
- **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

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunfteibereich:** 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**



GHS05 Ätzwirkung

Skin Corr. 1A H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

Eye Dam. 1 H318 Verursacht schwere Augenschäden.

- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- **Gefahrenpiktogramme**



GHS05

(Fortsetzung auf Seite 2)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

Handelsname: BISMUTH STAIN KIT 3

(Fortsetzung von Seite 1)

- **Signalwort Gefahr**

- **Gefahrbestimmende Komponenten zur Etikettierung:**

Natriumhydroxid

Periodsäure

- **Gefahrenhinweise**

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

- **Sicherheitshinweise**

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

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

P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.

P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).

P405 Unter Verschluss aufbewahren.

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

- **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.

- **Gefährliche Inhaltsstoffe:**

CAS: 64-17-5 EINECS: 200-578-6	Ethanol Flam. Liq. 2, H225	>10-≤25%
CAS: 868-18-8 EINECS: 212-773-3	Natriumtartrat Acute Tox. 4, H302	>10-≤25%
CAS: 1310-73-2 EINECS: 215-185-5	Natriumhydroxid Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	>10-≤25%
CAS: 10450-60-9 EINECS: 233-937-0	Periodsäure Ox. Sol. 2, H272; Skin Corr. 1B, H314	>10-≤25%

- **SVHC**

64-17-5 Ethanol

- **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.

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

- **Nach Einatmen:** Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.

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

- **Nach Augenkontakt:**

Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

Handelsname: BISMUTH STAIN KIT 3

(Fortsetzung von Seite 2)

- **Nach Verschlucken:**
Sofort Arzt aufsuchen.
Reichlich Wasser nachtrinken und Frischluftzufuhr. Unverzüglich Arzt hinzuziehen.
- **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:** Feuerlöschmaßnahmen auf die Umgebung abstimmen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

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.
Neutralisationsmittel anwenden.
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
Für ausreichende Lüftung sorgen.
- **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.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

DE

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

Handelsname: **BISMUTH STAIN KIT 3**

(Fortsetzung von Seite 3)

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

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

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

64-17-5 Ethanol

AGW	Langzeitwert: 380 mg/m ³ , 200 ml/m ³ 4(II);DFG, Y
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1310-73-2 Natriumhydroxid

MAK	vgl.Abschn.IIb
-----	----------------

- **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.

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

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

DE

(Fortsetzung auf Seite 5)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

Handelsname: BISMUTH STAIN KIT 3

(Fortsetzung von Seite 4)

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

Form:	Flüssig
Farbe:	Gemäß Produktbezeichnung
Geruch:	Charakteristisch
Geruchsschwelle:	Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· Zustandsänderung

Schmelzpunkt/Gefrierpunkt:	Nicht bestimmt.
Siedebeginn und Siedebereich:	Nicht bestimmt.

· **Flammpunkt:** Nicht anwendbar.

· **Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Das Produkt ist nicht selbstentzündlich.

· **Explosive Eigenschaften:** Das Produkt ist nicht explosionsgefährlich.

· Explosionsgrenzen:

Untere:	Nicht bestimmt.
Obere:	Nicht bestimmt.

· **Dampfdruck:** Nicht bestimmt.

· **Dichte:** Nicht bestimmt.

· **Relative Dichte** Nicht bestimmt.

· **Dampfdichte** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit** Nicht bestimmt.

· 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:	17,1 %
VOC (EU)	17,10 %

Festkörpergehalt: 0,0 %

· **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.

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

Handelsname: BISMUTH STAIN KIT 3

(Fortsetzung von Seite 5)

- **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** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

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

1310-73-2 Natriumhydroxid

Oral	LD50	2.000 mg/kg (rat)
------	------	-------------------

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**
Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenschäden.
- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Zusätzliche toxikologische Hinweise:**
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **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 2 (Selbsteinstufung): deutlich wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.
Trinkwassergefährdung bereits beim Auslaufen geringer 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.

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022


überarbeitet am: 05.01.2022

Handelsname: BISMUTH STAIN KIT 3

(Fortsetzung von Seite 6)

- 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;">UN1760</p>
<ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG, IATA 	<p style="text-align: right;">1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G. (NATRIUMHYDROXID) CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)</p>
<ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG, IATA 	<div style="text-align: center;">  </div> <p style="text-align: right;">8 Ätzende Stoffe 8</p>
<ul style="list-style-type: none"> · 14.4 Verpackungsgruppe · ADR, IMDG, IATA 	<p style="text-align: right;">II</p>
<ul style="list-style-type: none"> · 14.5 Umweltgefahren: 	<p style="text-align: right;">Nicht anwendbar.</p>
<ul style="list-style-type: none"> · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender · Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl): · EMS-Nummer: · Segregation groups · Stowage Category · Stowage Code 	<p style="text-align: right;">Achtung: Ätzende Stoffe 80 F-A,S-B Alkalis B SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> · 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code 	<p style="text-align: right;">Nicht anwendbar.</p>
<ul style="list-style-type: none"> · Transport/weitere Angaben: 	
<ul style="list-style-type: none"> · ADR · Begrenzte Menge (LQ) · Freigestellte Mengen (EQ) · Beförderungskategorie · Tunnelbeschränkungscode 	<p style="text-align: right;">1L Code: E2 Höchste Nettomenge je Innenverpackung: 30 ml Höchste Nettomenge je Außenverpackung: 500 ml 2 E</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p style="text-align: right;">1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

Handelsname: BISMUTH STAIN KIT 3

(Fortsetzung von Seite 7)

· UN "Model Regulation":	UN 1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G. (NATRIUMHYDROXID), 8, II
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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 Keiner der Inhaltsstoffe ist enthalten.
- VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII Beschränkungsbedingungen: 3

· Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II
--

Keiner der Inhaltsstoffe ist enthalten.

- VERORDNUNG (EU) 2019/1148

· Anhang I - BESCHRÄNKTE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE (Oberer Konzentrationsgrenzwert für eine Genehmigung nach Artikel 5 Absatz 3)
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Keiner der Inhaltsstoffe ist enthalten.

· Anhang II - MELDEPFLICHTIGE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE

Keiner der Inhaltsstoffe ist enthalten.

· Verordnung (EG) Nr. 273/2004 betreffend Drogenausgangsstoffe
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Keiner der Inhaltsstoffe ist enthalten.

· Verordnung (EG) Nr. 111/2005 zur Festlegung von Vorschriften für die Überwachung des Handels mit Drogenaustauschstoffen zwischen der Gemeinschaft und Drittländern
--

Keiner der Inhaltsstoffe ist enthalten.

- Nationale Vorschriften:

- Technische Anleitung Luft:

Klasse	Anteil in %
NK	17,1

- Wassergefährdungsklasse: WGK 2 (Selbsteinstufung): deutlich wassergefährdend.

- Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen

· Besonders besorgniserregende Stoffe (SVHC) gemäß REACH, Artikel 57
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64-17-5	Ethanol
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- 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

H225 Flüssigkeit und Dampf leicht entzündbar.

H272 Kann Brand verstärken; Oxidationsmittel.

H290 Kann gegenüber Metallen korrosiv sein.

H302 Gesundheitsschädlich bei Verschlucken.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

(Fortsetzung auf Seite 9)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 05.01.2022

überarbeitet am: 05.01.2022

Handelsname: BISMUTH STAIN KIT 3

(Fortsetzung von Seite 8)

H318 Verursacht schwere Augenschäden.

Abkürzungen und Akronyme:

ADR: Accord relatif au transport international 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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2

Ox. Sol. 2: Oxidierende Feststoffe – Kategorie 2

Met. Corr.1: Korrosiv gegenüber Metallen – Kategorie 1

Acute Tox. 4: Akute Toxizität – Kategorie 4

Skin Corr. 1A: Hautreizende/-ätzende Wirkung – Kategorie 1A

Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B

Eye Dam. 1: Schwere Augenschädigung/Augenreizung – Kategorie 1

DE

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

Stampato il: 05.01.2022

Revisione: 05.01.2022

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

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** BISMUTH STAIN KIT 3
- **Articolo numero:** 11436
- **UFI:** NOR1-HOWR-P00U-WS4Y
- **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
- **Società 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**



GHS05 corrosione

Skin Corr. 1A H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
Eye Dam. 1 H318 Provoca gravi lesioni oculari.

- **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**



GHS05

- **Avvertenza Pericolo**
- **Componenti pericolosi che ne determinano l'etichettatura:**
idrossido di sodio
acido ortoperiodico

(continua a pagina 2)

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

Stampato il: 05.01.2022

Revisione: 05.01.2022

Denominazione commerciale: BISMUTH STAIN KIT 3

(Segue da pagina 1)

· Indicazioni di pericolo

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

· Consigli di prudenza

P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliersi di dosso immediatamente tutti gli indumenti contaminati. Sciacquare la pelle [o 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.

P310 Contattare immediatamente un CENTRO ANTIVELENI/un medico.

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.**· Sostanze pericolose:**

CAS: 64-17-5 EINECS: 200-578-6	etanolo Flam. Liq. 2, H225	>10-≤25%
CAS: 868-18-8 EINECS: 212-773-3	tartrato di disodio Acute Tox. 4, H302	>10-≤25%
CAS: 1310-73-2 EINECS: 215-185-5	idrossido di sodio Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	>10-≤25%
CAS: 10450-60-9 EINECS: 233-937-0	acido ortoperiodico Ox. Sol. 2, H272; Skin Corr. 1B, H314	>10-≤25%

· SVHC

64-17-5 etanolo

· **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.

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:** 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 e consultare il medico.

· Ingestione:

Chiamare subito il medico.

Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del medico.

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

(continua a pagina 3)

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

Stampato il: 05.01.2022

Revisione: 05.01.2022

Denominazione commerciale: BISMUTH STAIN KIT 3

(Segue da pagina 2)

- **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:** Adottare provvedimenti antiincendio nei dintorni della zona colpita.
- **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:** Non sono richiesti provvedimenti particolari.

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).
Utilizzare mezzi di neutralizzazione.
Smaltimento del materiale contaminato conformemente al punto 13.
Provvedere ad una sufficiente areazione.
- **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.
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

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

· **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/m ³ , 1000 ppm
A3	

(continua a pagina 4)

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

Stampato il: 05.01.2022

Revisione: 05.01.2022

Denominazione commerciale: BISMUTH STAIN KIT 3

(Segue da pagina 3)

1310-73-2 idrossido di sodioTWA Limite Ceiling: 2 mg/m³

· **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.

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.

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:

Liquido

Colore:

In conformità con la denominazione del prodotto

· **Odore:**

Caratteristico

· **Soglia olfattiva:**

Non definito.

· **valori di pH:**

Non definito.

· **Cambiamento di stato**

Punto di fusione/punto di congelamento:

Non definito.

(continua a pagina 5)

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

Stampato il: 05.01.2022

Revisione: 05.01.2022

Denominazione commerciale: **BISMUTH STAIN KIT 3**

(Segue da pagina 4)

Punto di ebollizione iniziale e intervallo di ebollizione:	Non definito.
· Punto di infiammabilità:	Non applicabile.
· Infiammabilità (solidi, gas):	Non applicabile.
· Temperatura di decomposizione:	Non definito.
· Temperatura di autoaccensione:	Prodotto non autoinfiammabile.
· Proprietà esplosive:	Prodotto non esplosivo.
· Limiti di infiammabilità:	
Inferiore:	Non definito.
Superiore:	Non definito.
· Tensione di vapore:	Non definito.
· Densità:	Non definito.
· Densità relativa	Non definito.
· Densità di vapore:	Non definito.
· Velocità di evaporazione	Non definito.
· Solubilità in/Miscibilità con acqua:	Poco e/o non miscibile.
· Coefficiente di ripartizione: n-ottanolo/acqua:	Non definito.
· Viscosità:	
Dinamica:	Non definito.
Cinematica:	Non definito.
· Tenore del solvente:	
Solventi organici:	17,1 %
VOC (CE)	17,10 %
Contenuto solido:	0,0 %
· 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** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

(continua a pagina 6)

IT

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

Stampato il: 05.01.2022

Revisione: 05.01.2022

Denominazione commerciale: **BISMUTH STAIN KIT 3**

(Segue da pagina 5)

· Valori LD/LC50 rilevanti per la classificazione:		
1310-73-2 idrossido di sodio		
Orale	LD50	2.000 mg/kg (rat)

· **Irritabilità primaria:**· **Corrosione/irritazione cutanea**

Provoca gravi ustioni cutanee e gravi lesioni oculari.

· **Lesioni oculari gravi/irritazioni oculari gravi**

Provoca gravi lesioni oculari.

· **Sensibilizzazione respiratoria o cutanea**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Ulteriori dati tossicologici:**· **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**· **Mutagenicità delle cellule germinali**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.· **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.· **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **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.

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 2 (D) (Autoclassificazione): pericoloso

Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.

Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.

Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità 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.

IT

(continua a pagina 7)

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


Stampato il: 05.01.2022

Revisione: 05.01.2022

Denominazione commerciale: **BISMUTH STAIN KIT 3**

(Segue da pagina 6)

SEZIONE 14: Informazioni sul trasporto

· 14.1 Numero ONU · ADR, IMDG, IATA	UN1760
· 14.2 Nome di spedizione dell'ONU · ADR · IMDG, IATA	1760 LIQUIDO CORROSIVO, N.A.S. (IDROSSIDO DI SODIO) CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)
· 14.3 Classi di pericolo connesso al trasporto · ADR, IMDG, IATA	
	
· Classe · Etichetta	8 Materie corrosive 8
· 14.4 Gruppo di imballaggio · ADR, IMDG, IATA	II
· 14.5 Pericoli per l'ambiente:	Non applicabile.
· 14.6 Precauzioni speciali per gli utilizzatori · N° identificazione pericolo (Numero Kemler): · Numero EMS: · Segregation groups · Stowage Category · Stowage Code	Attenzione: Materie corrosive 80 F-A,S-B Alkalis B SW2 Clear of living quarters.
· 14.7 Trasporto di rifiuti secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR · Quantità limitate (LQ) · Quantità esenti (EQ)	1L Codice: E2 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 500 ml
· Categoria di trasporto · Codice di restrizione in galleria	2 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 1760 LIQUIDO CORROSIVO, N.A.S. (IDROSSIDO DI SODIO), 8, II

(continua a pagina 8)

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

Stampato il: 05.01.2022

Revisione: 05.01.2022

Denominazione commerciale: **BISMUTH STAIN KIT 3**

(Segue da pagina 7)

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** Nessuno dei componenti è contenuto.

· **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3

· **Direttiva 2011/65/UE sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche - Allegato II**

Nessuno dei componenti è contenuto.

· **REGOLAMENTO (UE) 2019/1148**

· **Allegato I - PRECURSORI DI ESPLOSIVI SOGGETTI A RESTRIZIONI (Valore limite superiore ai fini della concessione di licenze a norma dell'articolo 5, paragrafo 3)**

Nessuno dei componenti è contenuto.

· **Allegato II - PRECURSORI DI ESPLOSIVI SOGGETTI A SEGNALAZIONE**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) n. 273/2004 relativo ai precursori di droghe**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) N. 111/2005 recante norme per il controllo del commercio dei precursori di droghe tra la Comunità e i paesi terzi**

Nessuno dei componenti è contenuto.

· **Disposizioni nazionali:**

· **Istruzione tecnica aria:**

Classe	quota in %
NC	17,1

· **Ulteriori disposizioni, limitazioni e decreti proibitivi**

· **Sostanze estremamente preoccupanti (SVHC) ai sensi della regolamento REACH, articolo 57**

64-17-5 | etanolo

· **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

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.

· **Frase rilevanti**

H225 Liquido e vapori facilmente infiammabili.

H272 Può aggravare un incendio; comburente.

H290 Può essere corrosivo per i metalli.

H302 Nocivo se ingerito.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

H318 Provoca gravi lesioni oculari.

· **Abbreviazioni e acronimi:**

ADR: Accord relatif au transport international 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

(continua a pagina 9)

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(Segue da pagina 8)

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
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Liquidi infiammabili – Categoria 2
Ox. Sol. 2: Solidi comburenti – Categoria 2
Met. Corr. 1: Sostanze o miscele corrosive per i metalli – Categoria 1
Acute Tox. 4: Tossicità acuta – Categoria 4
Skin Corr. 1A: Corrosione/irritazione della pelle – Categoria 1A
Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B
Eye Dam. 1: Gravi lesioni oculari/irritazione oculare – Categoria 1

IT

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.05

개정: 2022.01.05

1 화학제품과 회사에 관한 정보

제품제품제명

· 제품명: BISMUTH STAIN KIT 3

· 상품번호: 11436

해당 해당 물질이나 혼합물(또는 관련 화합물)의 용도 및 사용금지용도

· 제품의 권고 용도와 사용 용도에 대한 제한 사항 BISMUTH STAIN KIT 3

· 제품의 권고 용도와 사용 용도에 대한 제한 사항 시험실 화학품

· 안전데이터표(Safety Data Sheet)내 공급업체 관련 정보(중요) 정보

· 제조자/수입자/유통업체 정보정보

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

Daedok Science, Co. Ltd.
34141 E10 Korea Advanced Institute of Science
Guseong-Dong, Yuseong-gu, Daejeon,
Korea
Phone: 82 42 710 2091
Fax: 82 42 367 0005
Website: www.labsmro.com

· 추가적인 정보(특히) 등(특히) 등 가능 product safety department

· 비상연락 전화번호:

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

2 유해성·위험성

· 순물질 또는 혼합물(또는) 분류분류



부식

피부 부식성/피부 자극성 - 구분 1 H314 피부에 심한 화상과 눈에 손상을 일으킴

심한 눈 손상성/눈 자극성 - 구분1 H318 눈에 심한 손상을 일으킴



급성 독성 - 경구 - 구분4

H302 삼키면 유해함

· 라벨표기요소요소

· 라벨라벨라벨요소

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

(2 쪽에 계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.05

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제품명: BISMUTH STAIN KIT 3

(1 쪽부터 계속)

· GHS 그림문자



GHS05 GHS07

· 신호어 위험

· **상표상에 명확히 위험성이 표시된 성분:**

disodium tartrate
수산화 나트륨
orthoperiodic acid

· 유해 위험

삼키면 유해함
피부에 심한 화상과 눈에 손상을 일으킴

· 예방 조치 문구

피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으십시오/샤워하십시오

· 눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으십시오. 즉시 독성물질센터/병원 연락 필요.

(라벨 참조) 처치를 하십시오.

밀봉하여 저장하십시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

· 기타 기타

- PBT(잔류성, 생물농축성, 물질분해성) 및 vPvB(고 잔류성, 고 생물농축성, 물질분해성)에 해당하지 않음.
- PBT(잔류성, 생물농축성, 물질분해성) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성, 물질분해성) 당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

설명 설명 설명: 혼합물. 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험 요소 요소

64-17-5	Ethyl alcohol ⚠ 인화성 액체 - 구분2, H225	>10-≤25%
868-18-8	disodium tartrate ⚠ 급성 독성 - 경구 - 구분3, H301	>10-≤25%
1310-73-2	수산화 나트륨 ⚠ 금속부식성 물질 - 구분1, H290; 피부 부식성/피부 자극성 - 구분 1, H314; 심한 눈 손상성/눈 자극성 - 구분1, H318; ⚠ 급성 독성 - 경구 - 구분4, H302	>10-≤25%
10450-60-9	orthoperiodic acid ⚠ 산화성 고체 - 구분2, H272; ⚠ 피부 부식성/피부 자극성 - 구분 1, H314; 심한 눈 손상성/눈 자극성 - 구분1, H318	>10-≤25%

4 응급조치 요령

· 응급조치요령 내용 내용

· 일 반적 정보 정보

이 제품에 의해 오염 된 의상은 즉시 제거한다.

(3 쪽에 계속)

물질안전보건자료 GHS에 따라라다

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제품명: BISMUTH STAIN KIT 3

(2 쪽부터 계속)

중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.

- **흡입했을 때:** 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.
- **눈에 눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 의사와 상담한다

- **먹었을 때:** 즉시 의사의 도움을 구한다. 물을 충분히 마시고 신선한 공기를 쐬다. 즉시 의사의 도움을 구한다.

기타 기타 각각의 주의사항:

- 가장가장 중요한 것은 중독 증상을 예방하는 방향적인 정보가 존재하지 않습니다.
- **즉각적인 의료 처치 및 특별 치료가 필요함을 시사하는 징후** 중 후적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

- 소화제
- **적절한 소화제:** 주변 환경에 맞는 화재 진화 방법을 사용한다.
- **본 화학 물질이나 혼합물에서 발생하면 특별한 위험 특성** 추가적인 정보가 존재하지 않습니다.
- **소방 관에 대한 신고 사항**
- **화재 화재를 예방 및 진압을 위한 보호구 및 예방 조치:** 특별한 조치가 필요없음.

6 누출 사고 시 대처방법

- **개인적 예방 조치, 보호 장비 및 응급 처치 절차** 안전 장비 착용하고, 무방비 의 사람은 격리 시킨다.
- **환경 환경 관리 조치:** 하수도망/해수면 위 의 물/지하수로 도달하지 않게 한다.
- **밀폐 밀폐 용기 및 화물 차량에 소재 소재**
- 액체가 혼합된 물질 (모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.
- 중성제를 사용한다.
- 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
- 충분한 환기가 되도록 한다.
- **식기 세탁기 사용 참조**
- 안전 관리에 대한 정보는 제7 장을 참고하십시오.
- 개인 보호 장비에 대한 정보는 제8 장을 참고하십시오.
- 쓰레기 처리에 대한 정보는 제13 장을 참고하십시오.

7 취급 및 저장방법

- 취급 취급 취급
- **안전 안전 예방 조치**
- 작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.
- 연무질이 형성되는 것을 피한다.
- **화재 화재 예방 및 화재 예방 대책에 관한 정보** 특별한 조치가 필요없음.
- **혼합 위험성 및 안정 조건** 조건
- 보관 보관 보관
- **안전 정보** 특별한 요구 사항이 없음.
- **하수 오염 방지 정보** 하수 오염 방지 정보 없음
- **보관 조건에 관한 추가 정보** 정보를 새지 않게 밀폐한 채 보관한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

물질안전보건자료 GHS에 따라 라다

인쇄일자: 2022.01.05

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제품명: BISMUTH STAIN KIT 3

(3 쪽부터 계속)

8 노출방지 및 개인보호구

· **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항 목 7 을 참고하시 오.

통제 ~~통제~~ ~~통제~~ 변수

· **화학물질의 노출기준, 생물학적 노출기준 등:**

64-17-5 Ethyl alcohol

OELV (KR)	장기간 의 값: 1000 ppm 발암성 1A
PEL (US)	장기간 의 값: 1900 mg/m ³ , 1000 ppm
REL (US)	장기간 의 값: 1900 mg/m ³ , 1000 ppm
TLV (US)	단기간 의 값: 1000 ppm A3

1310-73-2 수산화 나트륨

OELV (KR)	최고노출기준: 2 mg/m ³
PEL (US)	장기간 의 값: 2 mg/m ³
REL (US)	최고노출기준: 2 mg/m ³
TLV (US)	최고노출기준: 2 mg/m ³

· **추가정보** 정보 할 당시에 유 효 한 목 록 을 기 초 로 사 용 했 다.

노출 ~~노출~~ ~~노출~~ 통제

개인개인 ~~개인~~ 보호구

· **일반적보호조치및위생조치:**

- 식료품, 음료수와 사료로부터 멀리떨어뜨려 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식 전 이 나 작업이 끝날때마다 손을 씻는다.
- 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 혼합물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑의재료**

적합한장갑의선정은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

(5 쪽에 계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.05

개정: 2022.01.05

제품명: BISMUTH STAIN KIT 3

보통 보호보호

(4 쪽부터계속)



꼭조이는보안경

9 물리화학적 특성

기본 정보
 기본 물리화학적 특성에 대한 기본 정보

· 일반정보	
외형외형의형	액체의
· 물 강제 상태 상태	제품 표시에 따름
· 색:	특색있는
냄새 냄새 냄새	알맞지않다.
· 후각역치	
· pH:	알맞지않다.
· 상태변화	
· 녹는점/어는점:	맞지않는
초기초기 녹는 점과 끓는점 범위 범위	맞지않는
· 인화점:	해당사항 없음.
· 인화성 고체/기체/기체	해당사항 없음.
분해 분해 온도	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없다
인화 인화 온도 폭발 위험성 상한 상한	하한
· 아래로:	알맞지않다.
위로위로위로	알맞지않다.
· 증기압:	알맞지않다.
밀도 밀도 밀도	맞지않는다.
비중 비중 비중	알맞지않다.
· 증기밀도:	알맞지않다.
증발 증발 증발 속도	알맞지않다.
· 용해도:	
· 물:	각각의경우에따라서는 거의 혼합 할수 없는
· n 옥탄올/물 분배계수:	알맞지않다.
점도 점도 점도	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· 용매 내용물	
· 유기용매:	17.1 %
· VOC (EU)	17.10 %
· 고체 양 함량 함량	0.0 %

(6 쪽에계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.05

개정: 2022.01.05

제품명: BISMUTH STAIN KIT 3

(5 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 야한 조건 규정 에 따라 사용 할 경우 해체는 없다
- 유해 반응 가능성 위험한 반응으로는 알려지지 않았다.
- 피해 야한 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 유해 물질 추가적인 정보가 존재하지 않습니다.
- 유해 분 해 물질: 위험성 있는 분 해 물 들 은 알려지지 않았다.

11 독성에 관한 정보

· 독성학적 영향 에 대한 정보
급성 독성 독성 독성

· LD/LC50-수 체 에 대한 분류
1310-73-2 수산화 나트륨
구강의 LD50 2,000 mg/kg (rat)

- 일차적 자극 효과
- 피부 피부 부식성 또는 자극 성: 피부와 점막에 강한 부식 작용.
- 심한 심한 부식성 또는 자극 성:
- 강한 부식 작용
- 심각한 안구상처의 위험이 있는 강한 자극
- 감각 화: 민감한 영향 이 없는 것으로 알려 져 있다.
- 추가적인 독성에 관한 정보
- 이제 품은 유럽 공동체의 공동 분류 원칙의 합법적인 절차에 근거하여 최근에 발효된 원고에서 아래 위험들 의사 전 준비에 대하여 제시 하고 있다.
- 건강에 해로운
- 부식 작용의
- 자극적인
- 삼킬 경우 식도나 위 등의 내장 기관 벽에 상처를 주는 위험과 마찬가지로 입 주변이나 구강에 강한 부식 작용을 한다

12 환경에 미치는 영향

독성 독성 독성

- 수생 독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물 농축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양 내 이동성 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태학 정보
- 일반 염분 용액 특징
- 수질 오염 등급 2 (자체 등급 분류): 수질 오염이 된 지하수나, 하천으로 또는 하수도 망 에 도달 하지 않게 한다.
- 회석 시키지 않은 채 또는 중화 시키지 않은 채 하수도나 배수 로 에 도달 하지 않게 해야 한다.
- 지하수로 경미한 양이 유입 되었을 경우 엔 이미 식수 오염 상태 이다
- PBT(잔류성, 생물 농축성, 물질 독성) 및 PpB(고 잔류성, 고 생물 농축성 물질)에 해당 하지 않음
- PBT(잔류성, 생물 농축성, 물질 독성) 물질 독성 물질 독성 당 사 항 없음.

(7 쪽에 계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.05

개정: 2022.01.05

제품명: BISMUTH STAIN KIT 3

· vPvB(고 잔류성, 고 생물농축성) 물질로 해당 사항 없음.
기타 기타 **부작용** 추가적인 정보가 존재하지 않습니다.

(6 쪽부터 계속)

13 폐기시 주의사항

· 폐기물 처리 방법
권고 권고 권고 쓰레기와 함께 처리되어서는 안 된다. 하수도망으로 유입되어서는 안 된다.
· 비위생적 포장 포장
권고 권고 권고 의지 침에 입각 한 쓰레기 처리.

14 운송에 필요한 정보

유엔 유엔 유엔 번호 · ADR, IMDG, IATA	UN1760
· 적정적 정정 정명 · ADR · IMDG, IATA	1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE) CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)
교통 교통 교통 위험 클래스 · ADR, IMDG, IATA	
	
등급 등급 등급 · 위험물 라벨 라벨	8 부식 작용하는 물질 8
· 용기 등급 · ADR, IMDG, IATA	II
· 환경적 유해물질:	해당 사항 없음.
· 이동 시 특별 취급 조치 위험 위험 위험 코드 · E 번호 번호 번호 · Segregation groups · Stowage Category · Stowage Code	경고: 부식 작용하는 물질 80 F-A,S-B Alkalis B SW2 Clear of living quarters.
· MARPOL 73/78(선박으로부터의 해양 오염 방지협약) 부속서 2 및 IBC Code(국제 선적 화물 코드)에 따라 별도 별도 별도 운송 운송	해당 사항 없음.
· 운송/ 추가 정보	
· ADR 한정 한정 한정 (수량) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
운송 운송 운송 구분	2

(8 쪽에 계속)

인쇄일자: 2022.01.05

개정: 2022.01.05

제품명: BISMUTH STAIN KIT 3

(7 쪽부터 계속)

터널 터널 터널 터널 터널 · IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	E 1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN번호	UN 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE), 8, II

15 법적 규제현황

· 산업안전보건법에 의한 유해물 규제	
제조제조제품금지물질:	
어떠한내용물도 목록화 되어있지 않다	
· 허가대상물질:	
어떠한내용물도 목록화 되어있지 않다	
· 관리대상유해물질:	
1310-73-2	수산화 나트륨
· 작업환경측정 대상 유해인자	
1310-73-2	수산화 나트륨
	1C6
· 특수건강검진 대상 유해인자	
어떠한내용물도 목록화 되어있지 않다	

해당 해당 수량을 잘 또는 모든 물질에 대한 안전보건자료는 해당 제조업체를 방문하여 정보를 존재하지 않습니다.

· Korean Existing Chemical Inventory		
64-17-5	Ethyl alcohol	KE-13217
127-09-3	sodium acetate	KE-00061
868-18-8	disodium tartrate	KE-12382
1304-85-4	Bismuth Subnitrate	KE-03350
1310-73-2	수산화 나트륨	KE-31487
10450-60-9	orthoperiodic acid	KE-27426

· 화학물질관리법	
· 사고대비물질	
어떠한내용물도 목록화 되어있지 않다	
· 금지물질	
어떠한내용물도 목록화 되어있지 않다	
· 제한물질	
어떠한내용물도 목록화 되어있지 않다	
· 유독물질	
1310-73-2	수산화 나트륨
· 허가물질	
1310-73-2	수산화 나트륨
· 위험물안전관리법 (위험물 및 지정수량) 제 4: 400 리터	

(9 쪽에 계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.05

개정: 2022.01.05

제품명: BISMUTH STAIN KIT 3

(8 쪽부터 계속)

등록 목록 등록 여부 선택 대상 화학물질

어떠한 내용물도 목록화 되어있지 않다

· '21년까지 등록하여야 할 암, 돌연변이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 ~~있는~~ 화학물질

어떠한 내용물도 목록화 되어있지 않다

· 중점관리물질을 지정

· 표1 중점관리물질(제한관련관련)

어떠한 내용물도 목록화 되어있지 않다

· 표2 중점관리물질(제한관련관련)

어떠한 내용물도 목록화 되어있지 않다

· 라벨 라벨 요소

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

· GHS 그림문자



GHS05 GHS07

· 신호어 위험

· 상표상에 명확히 위험성이 표시된 성분:

disodium tartrate

수산화 나트륨

orthoperiodic acid

유해 유해 위험 문구

삼키면 유해함

피부에 심한 화상과 눈에 손상을 일으킴

· 예방조치문구

피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으시오/샤워하십시오

· 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.

즉시 독성물질센터/병원 연락 필요.

(라벨 참조) 처치를 하시오.

밀봉하여 저장 하시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기 하시오.

· 화학물질 안전성 평가 항목 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이 보고서는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

당첨당자당자

최초 최초 작성 일자: 2022.01.05

개정 개정 개정 최종 개정 일자: 1 / 2022.01.05

· 약어와 두문자어:

ADR: Accord relatif au transport international 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)

(10 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2022.01.05

개정: 2022.01.05

제품명: BISMUTH STAIN KIT 3

(9 쪽부터계속)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

KR

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

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

- **1.1 Identificador del producto**
- **Nombre comercial:** BISMUTH STAIN KIT 3
- **Número del artículo:** 11436
- **UFI:** NOR1-HOWR-P00U-WS4Y
- **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**



GHS05 corrosión

Skin Corr. 1A H314 Provoca quemaduras graves en la piel y lesiones oculares graves.
Eye Dam. 1 H318 Provoca lesiones oculares graves.

- **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**



GHS05

- **Palabra de advertencia** Peligro
- **Componentes peligrosos a indicar en el etiquetaje:**
hidróxido de sodio
ácido ortoperiodico

(se continua en página 2)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: BISMUTH STAIN KIT 3

(se continua en página 1)

· Indicaciones de peligro

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

· Consejos de prudencia

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente toda la ropa contaminada. Enjuagar la piel con agua [o ducharse].

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Enjuagar con agua cuidadosamente durante varios minutos. Quitar las lentes de contacto cuando estén presentes y pueda hacerse con facilidad. Proseguir con el lavado.

P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.

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.

· Componentes peligrosos:

CAS: 64-17-5 EINECS: 200-578-6	etanol Flam. Liq. 2, H225	>10-≤25%
CAS: 868-18-8 EINECS: 212-773-3	tartrato de sodio Acute Tox. 4, H302	>10-≤25%
CAS: 1310-73-2 EINECS: 215-185-5	hidróxido de sodio Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	>10-≤25%
CAS: 10450-60-9 EINECS: 233-937-0	ácido ortoperiodico Ox. Sol. 2, H272; Skin Corr. 1B, H314	>10-≤25%

· SVHC

64-17-5 etanol

· 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.

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· En caso de inhalación del producto:

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 y consultar un médico.

· En caso de ingestión:

Consultar inmediatamente un médico.

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: BISMUTH STAIN KIT 3

(se continua en página 2)

- *Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.*
- **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:** *Combatir los incendios con medidas adaptados al ambiente circundante.*
- **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:** *No se requieren medidas especiales.*

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).
Utilizar un neutralizador.
Desechar el material contaminado como vertido según item 13.
Asegurar suficiente ventilación.*
- **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.
Evitar la formación de aerosoles.*
- **Prevención de incendios y explosiones:** *No se requieren medidas especiales.*
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** *No se requieren medidas especiales.*
- **Normas en caso de un almacenamiento conjunto:** *No es necesario.*
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** *No existen más datos relevantes disponibles.*

SECCIÓN 8: Controles de exposición/protección individual

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

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: BISMUTH STAIN KIT 3

(se continua en página 3)

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

64-17-5 etanol

LEP Valor de corta duración: 1910 mg/m³, 1000 ppm

s

1310-73-2 hidróxido de sodio

LEP Valor de corta duración: 2 mg/m³

· **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.

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.

· 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:

Líquido

Color:

Según denominación del producto

· Olor:

Característico

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: **BISMUTH STAIN KIT 3**

(se continua en página 4)

· Umbral olfativo:	No determinado.
· valor pH:	No determinado.
· Cambio de estado Punto de fusión/punto de congelación:	Indeterminado.
Punto inicial de ebullición e intervalo de ebullición:	Indeterminado.
· Punto de inflamación:	No aplicable.
· Inflamabilidad (sólido, gas):	No aplicable.
· Temperatura de descomposición:	No determinado.
· Temperatura de auto-inflamación:	El producto no es autoinflamable.
· Propiedades explosivas:	El producto no es explosivo.
· Límites de explosión: Inferior:	No determinado.
Superior:	No determinado.
· Presión de vapor:	No determinado.
· Densidad:	Indeterminado.
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Poco o no mezclable.
· Coefficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad: Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente: Disolventes orgánicos:	17,1 %
VOC (CE)	17,10 %
· Contenido de cuerpos sólidos:	0,0 %
· 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.

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(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: BISMUTH STAIN KIT 3

(se continua en página 5)

SECCIÓN 11: Información toxicológica

· 11.1 Información sobre los efectos toxicológicos

· **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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

1310-73-2 hidróxido de sodio

Oral	LD50	2.000 mg/kg (rat)
------	------	-------------------

· **Efecto estimulante primario:**

· **Corrosión o irritación cutáneas**

Provoca quemaduras graves en la piel y lesiones oculares graves.

· **Lesiones o irritación ocular graves**

Provoca lesiones oculares graves.

· **Sensibilización respiratoria o cutánea**

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **Indicaciones toxicológicas adicionales:**

· **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**

· **Mutagenicidad en células germinales**

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **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**

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **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.

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 2 (autoclasiificación): peligroso para el agua

No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.

En estado no diluido o no neutralizado, no verter en el alcantarillado o en otros sistemas de desagüe.

Una cantidad mínima 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.

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: **BISMUTH STAIN KIT 3**

(se continua en página 6)

- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

SECCIÓN 14: Información relativa al transporte

<ul style="list-style-type: none"> · 14.1 Número ONU · ADR, IMDG, IATA 	<p style="text-align: right;">UN1760</p>
<ul style="list-style-type: none"> · 14.2 Designación oficial de transporte de las Naciones Unidas · ADR · IMDG, IATA 	<p style="text-align: right;">1760 LÍQUIDO CORROSIVO, N.E.P. (HIDRÓXIDO SÓDICO)</p> <p style="text-align: right;">CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE)</p>
<ul style="list-style-type: none"> · 14.3 Clase(s) de peligro para el transporte · ADR, IMDG, IATA 	<p style="text-align: right;">8 Materias corrosivas</p> <p style="text-align: right;">8</p>
<ul style="list-style-type: none"> · Clase · Etiqueta 	<p style="text-align: right;">8 Materias corrosivas</p> <p style="text-align: right;">8</p>
<ul style="list-style-type: none"> · 14.4 Grupo de embalaje · ADR, IMDG, IATA 	<p style="text-align: right;">II</p>
<ul style="list-style-type: none"> · 14.5 Peligros para el medio ambiente: 	<p style="text-align: right;">No aplicable.</p>
<ul style="list-style-type: none"> · 14.6 Precauciones particulares para los usuarios · Número de identificación de peligro (Número Kemler): · Número EMS: · Segregation groups · Stowage Category · Stowage Code 	<p style="text-align: right;">Atención: Materias corrosivas</p> <p style="text-align: right;">80</p> <p style="text-align: right;">F-A,S-B</p> <p style="text-align: right;">Alkalis</p> <p style="text-align: right;">B</p> <p style="text-align: right;">SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> · 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC 	<p style="text-align: right;">No aplicable.</p>
<ul style="list-style-type: none"> · Transporte/datos adicionales: 	
<ul style="list-style-type: none"> · ADR · Cantidades limitadas (LQ) · Cantidades exceptuadas (EQ) 	<p style="text-align: right;">1L</p> <p style="text-align: right;">Código: E2</p> <p style="text-align: right;">Cantidad neta máxima por envase interior: 30 ml</p> <p style="text-align: right;">Cantidad neta máxima por embalaje exterior: 500 ml</p>
<ul style="list-style-type: none"> · Categoría de transporte · Código de restricción del túnel 	<p style="text-align: right;">2</p> <p style="text-align: right;">E</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p style="text-align: right;">1L</p> <p style="text-align: right;">Code: E2</p> <p style="text-align: right;">Maximum net quantity per inner packaging: 30 ml</p> <p style="text-align: right;">Maximum net quantity per outer packaging: 500 ml</p>

(se continua en página 8)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: BISMUTH STAIN KIT 3

(se continua en página 7)

· "Reglamentación Modelo" de la UNECE: UN 1760 LÍQUIDO CORROSIVO, N.E.P. (HIDRÓXIDO SÓDICO), 8, 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 ninguno de los componentes está incluido en una lista

· REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3

· Directiva 2011/65/UE sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos - Anexo II

ninguno de los componentes está incluido en una lista

· REGLAMENTO (UE) 2019/1148

· Anexo I - PRECURSORES DE EXPLOSIVOS RESTRINGIDOS (Valor límite superior a efectos de la concesión de licencias con arreglo al artículo 5, apartado 3)

ninguno de los componentes está incluido en una lista

· Anexo II - PRECURSORES DE EXPLOSIVOS NOTIFICABLES

ninguno de los componentes está incluido en una lista

· Reglamento (CE) no 273/2004 sobre precursores de drogas

ninguno de los componentes está incluido en una lista

· Reglamento (CE) N o 111/2005 por el que establecen normas para la vigilancia del comercio de precursores de drogas entre la Comunidad y terceros países

ninguno de los componentes está incluido en una lista

· Disposiciones nacionales:

· Demás disposiciones, limitaciones y decretos prohibitivos

· Sustancias altamente preocupantes (SVHC) según REACH, artículo 57

64-17-5 etanol

· **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.

· Frases relevantes

H225 Líquido y vapores muy inflamables.

H272 Puede agravar un incendio; comburente.

H290 Puede ser corrosivo para los metales.

H302 Nocivo en caso de ingestión.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H318 Provoca lesiones oculares graves.

· Abreviaturas y acrónimos:

ADR: Accord relatif au transport international 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

(se continua en página 9)

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

fecha de impresión 05.01.2022

Revisión: 05.01.2022

Nombre comercial: BISMUTH STAIN KIT 3

(se continua en página 8)

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
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Líquidos inflamables – Categoría 2
Ox. Sol. 2: Sólidos comburentes – Categoría 2
Met. Corr.1: Corrosivos para los metales – Categoría 1
Acute Tox. 4: Toxicidad aguda – Categoría 4
Skin Corr. 1A: Corrosión o irritación cutáneas – Categoría 1A
Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B
Eye Dam. 1: Lesiones oculares graves o irritación ocular – Categoría 1

ES