

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/06/2018

Reviewed on 09/06/2018

## 1 Identification

- **Product identifier**
- **Trade name:** Kodak Polymax T Developer
- **Article number:** 74232-01, 74232-12
- **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

- Muta. 2 H341 Suspected of causing genetic defects.  
 Carc. 2 H351 Suspected of causing cancer.  
 STOT SE 2 H371 May cause damage to organs.  
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

- Acute Tox. 4 H302 Harmful if swallowed.  
 Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2A H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.

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



GHS07 GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
4,4-dimethyl-1-phenyl-3-pyrazolidone  
hydroquinone  
Metol

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**Trade name: Kodak Polymax T Developer**

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## POTASSIUM HYDROXIDE

### · Hazard statements

- Harmful if swallowed.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause an allergic skin reaction.
- Suspected of causing genetic defects.
- Suspected of causing cancer.
- May cause damage to organs.
- May cause damage to organs through prolonged or repeated exposure.

### · 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/vapors/spray.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Rinse mouth.
- If on skin: Wash with plenty of water.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF exposed or concerned: Get medical advice/attention.
- Get medical advice/attention if you feel unwell.
- Take off contaminated clothing and wash it before reuse.
- If skin irritation or rash occurs: Get medical advice/attention.
- Specific treatment (see on this label).
- If eye irritation persists: Get medical advice/attention.
- 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)



Health = 2

Fire = 0

Reactivity = 0

#### · HMIS-ratings (scale 0 - 4)



Health = \*2

Fire = 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.

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<b>· Dangerous components:</b>		
584-08-7	potassium carbonate	≤2.5%
111-46-6	2,2'-oxybisethanol	≤2.5%
123-31-9	hydroquinone	≤2.5%
1310-58-3	POTASSIUM HYDROXIDE	≤2.5%
55-55-0	Metol	≤2.5%
2654-58-2	4,4-dimethyl-1-phenyl-3-pyrazolidone	≤2.5%

## 4 First-aid measures

- **Description of first aid measures**

- **General information:**

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

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

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

- **After eye contact:**

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

- **After swallowing:** 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** Not required.

- **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **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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### · Protective Action Criteria for Chemicals

· PAC-1:		
7647-15-6	sodium bromide	12 mg/m <sup>3</sup>
584-08-7	potassium carbonate	5.6 mg/m <sup>3</sup>
111-46-6	2,2'-oxybisethanol	6.9 ppm
123-31-9	hydroquinone	3 mg/m <sup>3</sup>
1310-58-3	POTASSIUM HYDROXIDE	0.18 mg/m <sup>3</sup>
· PAC-2:		
7647-15-6	sodium bromide	130 mg/m <sup>3</sup>
584-08-7	potassium carbonate	62 mg/m <sup>3</sup>
111-46-6	2,2'-oxybisethanol	140 ppm
123-31-9	hydroquinone	20 mg/m <sup>3</sup>
1310-58-3	POTASSIUM HYDROXIDE	2 mg/m <sup>3</sup>
· PAC-3:		
7647-15-6	sodium bromide	830 mg/m <sup>3</sup>
584-08-7	potassium carbonate	370 mg/m <sup>3</sup>
111-46-6	2,2'-oxybisethanol	860 ppm
123-31-9	hydroquinone	120 mg/m <sup>3</sup>
1310-58-3	POTASSIUM HYDROXIDE	54 mg/m <sup>3</sup>

## 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.

<b>111-46-6 2,2'-oxybisethanol</b>	
WEEL	Long-term value: 10 mg/m <sup>3</sup>

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**123-31-9 hydroquinone**

PEL	Long-term value: 2 mg/m <sup>3</sup>
REL	Ceiling limit value: 2* mg/m <sup>3</sup> *15-min
TLV	Long-term value: 1 mg/m <sup>3</sup> DSEN

**1310-58-3 POTASSIUM HYDROXIDE**

REL	Ceiling limit value: 2 mg/m <sup>3</sup>
TLV	Ceiling limit value: 2 mg/m <sup>3</sup>

· **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 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:** Liquid  
**Color:** Light brown

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· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	>100 °C (>212 °F)
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not flammable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	1.4 hPa (1.1 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.35 g/cm <sup>3</sup> (11.26575 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	1.0 %
<b>Water:</b>	91.9 %
<b>VOC content:</b>	1.01 %
	-56.7 g/l / -0.47 lb/gal
<b>Solids content:</b>	1.0 %
· <b>Other information</b>	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.

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## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

<b>123-31-9 hydroquinone</b>		
Oral	LD50	320 mg/kg (rat)
<b>1310-58-3 POTASSIUM HYDROXIDE</b>		
Oral	LD50	273 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Irritating effect.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

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

Harmful

Irritant

- **Carcinogenic categories**

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

123-31-9	hydroquinone	3
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- **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.

- **Ecotoxic effects:**

- **Remark:**

Toxic for fish

Harmful to fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Harmful to aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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· **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |                                                                                     |                               |
|-------------------------------------------------------------------------------------|-------------------------------|
| · <b>UN-Number</b>                                                                  |                               |
| · <b>DOT, ADR, IMDG, IATA</b>                                                       | UN2209                        |
| · <b>UN proper shipping name</b>                                                    |                               |
| · <b>DOT</b>                                                                        | Formaldehyde solutions        |
| · <b>ADR</b>                                                                        | 2209 Formaldehyde solutions   |
| · <b>IMDG, IATA</b>                                                                 | FORMALDEHYDE SOLUTION         |
| · <b>Transport hazard class(es)</b>                                                 |                               |
| · <b>DOT</b>                                                                        |                               |
|  |                               |
| · <b>Class</b>                                                                      | 8 Corrosive substances        |
| · <b>Label</b>                                                                      | 8                             |
|                                                                                     |                               |
| · <b>ADR, IMDG, IATA</b>                                                            |                               |
|  |                               |
| · <b>Class</b>                                                                      | 8 Corrosive substances        |
| · <b>Label</b>                                                                      | 8                             |
| · <b>Packing group</b>                                                              |                               |
| · <b>DOT, ADR, IMDG, IATA</b>                                                       | III                           |
| · <b>Environmental hazards:</b>                                                     | Not applicable.               |
| · <b>Special precautions for user</b>                                               | Warning: Corrosive substances |
| · <b>Danger code (Kemler):</b>                                                      | 80                            |
| · <b>EMS Number:</b>                                                                | F-A,S-B                       |
| · <b>Stowage Category</b>                                                           | A                             |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>    | Not applicable.               |

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Trade name: Kodak Polymax T Developer

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· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60

· **ADR**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 2209 FORMALDEHYDE SOLUTIONS, 8, III

## 15 Regulatory information

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

· **Sara**

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

123-31-9	hydroquinone
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· **Section 313 (Specific toxic chemical listings):**

123-31-9	hydroquinone
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **TSCA new (21st Century Act) (Substances not listed)**

55-55-0	Metol
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2654-58-2	4,4-dimethyl-1-phenyl-3-pyrazolidone
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· **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:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

123-31-9	hydroquinone
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Printing date 09/06/2018

Reviewed on 09/06/2018

**Trade name: Kodak Polymax T Developer**

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· **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**



GHS07    GHS08

· **Signal word** Warning

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

4,4-dimethyl-1-phenyl-3-pyrazolidone

hydroquinone

Metol

POTASSIUM HYDROXIDE

· **Hazard statements**

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of causing cancer.

May cause damage to organs.

May cause damage to organs through prolonged or repeated exposure.

· **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/vapors/spray.

Wash thoroughly after handling.

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

Contaminated work clothing must not be allowed out of the workplace.

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

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see on this label).

If eye irritation persists: Get medical advice/attention.

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.

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## acc. to OSHA HCS

Printing date 09/06/2018

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**Trade name: Kodak Polymax T Developer**

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### 16 Other information

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

· **Date of preparation / last revision** 09/06/2018 / -

· **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

**Acute Tox. 4: Acute toxicity – Category 4**

**Skin Irrit. 2: Skin corrosion/irritation – Category 2**

**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**

**Skin Sens. 1: Skin sensitisation – Category 1**

**Muta. 2: Germ cell mutagenicity – Category 2**

**Carc. 2: Carcinogenicity – Category 2**

**STOT SE 2: Specific target organ toxicity (single exposure) – Category 2**

**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**

US

# Safety Data Sheet

## according to WHS Regulations

Printing date 06.09.2018

Revision: 06.09.2018

### 1 Identification

- **Product identifier**
- **Trade name:** Kodak Polymax T Developer
- **Article number:** 74232-01, 74232-12
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://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](http://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](http://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

- Muta. 2 H341 Suspected of causing genetic defects.  
 Carc. 2 H351 Suspected of causing cancer.  
 STOT SE 2 H371 May cause damage to organs.  
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

- Acute Tox. 4 H302 Harmful if swallowed.  
 Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2A H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.

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# Safety Data Sheet

## according to WHS Regulations

Printing date 06.09.2018

Revision: 06.09.2018

Trade name: **Kodak Polymax T Developer**

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- **Label elements**

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

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Warning

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

4,4-dimethyl-1-phenyl-3-pyrazolidone

hydroquinone

Metol

POTASSIUM HYDROXIDE

- **Hazard statements**

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of causing cancer.

May cause damage to organs.

May cause damage to organs through prolonged or repeated exposure.

- **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.

Contaminated work clothing should not be allowed out of the workplace.

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

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

Rinse mouth.

IF ON SKIN: Wash with plenty of water.

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

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see on this label).

If eye irritation persists: Get medical advice/attention.

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.

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# Safety Data Sheet

## according to WHS Regulations

Printing date 06.09.2018

Revision: 06.09.2018

Trade name: Kodak Polymax T Developer

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### 3 Composition and Information on Ingredients

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

- **Dangerous components:**

584-08-7	potassium carbonate	≤2.5%
111-46-6	2,2'-oxybisethanol	≤2.5%
123-31-9	hydroquinone	≤2.5%
1310-58-3	POTASSIUM HYDROXIDE	≤2.5%
55-55-0	Metol	≤2.5%
2654-58-2	4,4-dimethyl-1-phenyl-3-pyrazolidone	≤2.5%

- **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:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** 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** Not required.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.

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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 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:**

**111-46-6 2,2'-oxybisethanol**

NES Long-term value: 100 mg/m<sup>3</sup>, 23 ppm

WES Long-term value: 100 mg/m<sup>3</sup>, 23 ppm

**123-31-9 hydroquinone**

NES Long-term value: 2 mg/m<sup>3</sup>

WES Long-term value: 2 mg/m<sup>3</sup>

**1310-58-3 POTASSIUM HYDROXIDE**

NES Peak limitation: 2 mg/m<sup>3</sup>

WES Peak limitation: 2 mg/m<sup>3</sup>

· **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 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.

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## Safety Data Sheet according to WHS Regulations

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### · 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:

<b>Form:</b>	Liquid
<b>Colour:</b>	Light brown
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

#### · Change in condition

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	>100 °C

· **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:

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapour pressure at 20 °C:** 1.4 hPa

· **Density at 20 °C:** 1.35 g/cm<sup>3</sup>

· **Relative density** Not determined.

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Trade name: Kodak Polymax T Developer

(Contd. of page 5)

· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	1.0 %
Water:	91.9 %
VOC (EC)	1.01 %
· Solids content:	1.0 %
· 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:

##### 123-31-9 hydroquinone

Oral	LD50	320 mg/kg (rat)
------	------	-----------------

##### 1310-58-3 POTASSIUM HYDROXIDE

Oral	LD50	273 mg/kg (rat)
------	------	-----------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **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

Irritant

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Muta. 2, Carc. 2

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### 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.
- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **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.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- |                                                                                                                                                                                                                       |                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>ADG, IMDG, IATA</b></li> </ul>                                                                                                                | UN2209                                              |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADG</b></li> <li>· <b>IMDG, IATA</b></li> </ul>                                                                                 | 2209 FORMALDEHYDE SOLUTION<br>FORMALDEHYDE SOLUTION |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>ADG, IMDG, IATA</b></li> </ul>                                                                                               |                                                     |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul> | 8 Corrosive substances.<br>8                        |

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· <b>Packing group</b> · <b>ADG, IMDG, IATA</b>	<i>III</i>
· <b>Environmental hazards:</b>	<i>Not applicable.</i>
· <b>Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b> · <b>Stowage Category</b>	<i>Warning: Corrosive substances.</i> <i>80</i> <i>F-A,S-B</i> <i>A</i>
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	<i>Not applicable.</i>
· <b>Transport/Additional information:</b>	
· <b>ADG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	<i>5L</i> <i>Code: E1</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 1000 ml</i>
· <b>Transport category</b> · <b>Tunnel restriction code</b>	<i>3</i> <i>E</i>
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	<i>5L</i> <i>Code: E1</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 1000 ml</i>
· <b>UN "Model Regulation":</b>	<i>UN 2209 FORMALDEHYDE SOLUTION, 8, III</i>

### 15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

*All ingredients are listed.*

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

7647-15-6	sodium bromide	S4
111-46-6	2,2'-oxybisethanol	S5, S6, S10
123-31-9	hydroquinone	S2, S4, S6
1310-58-3	POTASSIUM HYDROXIDE	S5, S6, S10

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

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** *Warning*

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

*4,4-dimethyl-1-phenyl-3-pyrazolidone*

*hydroquinone*

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## Safety Data Sheet according to WHS Regulations

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**Trade name: Kodak Polymax T Developer**

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*Metol***POTASSIUM HYDROXIDE**

- **Hazard statements**

*Harmful if swallowed.**Causes skin irritation.**Causes serious eye irritation.**May cause an allergic skin reaction.**Suspected of causing genetic defects.**Suspected of causing cancer.**May cause damage to organs.**May cause damage to organs through prolonged or repeated exposure.*

- **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.**Contaminated work clothing should not be allowed out of the workplace.**Wear protective gloves/protective clothing/eye protection/face protection.**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**Rinse mouth.**IF ON SKIN: Wash with plenty of water.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Get medical advice/attention if you feel unwell.**Take off contaminated clothing and wash it before reuse.**If skin irritation or rash occurs: Get medical advice/attention.**Specific treatment (see on this label).**If eye irritation persists: Get medical advice/attention.**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.

- **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.*

- **Abbreviations and acronyms:**

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

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

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

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Acute Tox. 4: Acute toxicity – Category 4*

*Skin Irrit. 2: Skin corrosion/irritation – Category 2*

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*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**Skin Sens. 1: Skin sensitisation – Category 1**Muta. 2: Germ cell mutagenicity – Category 2**Carc. 2: Carcinogenicity – Category 2**STOT SE 2: Specific target organ toxicity (single exposure) – Category 2**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*

AU

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/06/2018

Reviewed on 09/06/2018

## 1 Identification

- **Product identifier**
- **Trade name:** Kodak Polymax T Developer
- **Article number:** 74232-01, 74232-12
- **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

Germ Cell Mutagenicity - Category 2	H341 Suspected of causing genetic defects.
Carcinogenicity – Category 2	H351 Suspected of causing cancer.
Specific Target Organ Toxicity - Single Exposure - Category 2	H371 May cause damage to organs.
Specific Target Organ Toxicity - Repeated Exposure - Category 2	H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Toxicity (Oral) - Category 4	H302 Harmful if swallowed.
Skin Irritation - Category 2	H315 Causes skin irritation.
Eye Irritation - Category 2A	H319 Causes serious eye irritation.
Skin Sensitizer - Category 1	H317 May cause an allergic skin reaction.

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



GHS07 GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
4,4-dimethyl-1-phenyl-3-pyrazolidone

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CA

# Safety Data Sheet

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Printing date 09/06/2018

Reviewed on 09/06/2018

**Trade name: Kodak Polymax T Developer**

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hydroquinone

Metol

POTASSIUM HYDROXIDE

· **Hazard statements**

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of causing cancer.

May cause damage to organs.

May cause damage to organs through prolonged or repeated exposure.

· **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.

Contaminated work clothing should not be allowed out of the workplace.

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

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

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

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see on this label).

If eye irritation persists: Get medical advice/attention.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 0

Reactivity = 0

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

584-08-7	potassium carbonate	0.5-1.5% w/w *
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**Trade name: Kodak Polymax T Developer**

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111-46-6	2,2'-oxybisethanol	0.5-1.5% w/w *
123-31-9	hydroquinone	0.5-1.5% w/w *
1310-58-3	POTASSIUM HYDROXIDE	0.5-1.5% w/w *
55-55-0	Metol	0.5-1.5% w/w *
2654-58-2	4,4-dimethyl-1-phenyl-3-pyrazolidone	0.5-1.5% w/w *

\* Actual concentration ranges are withheld as a trade secret.

## 4 First-aid measures

- **Description of first aid measures**

- **General information:**

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

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

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

- **After eye contact:**

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

- **After swallowing:** 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** Not required.

- **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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**Trade name: Kodak Polymax T Developer**

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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.
- **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:**

### 123-31-9 hydroquinone

EL Long-term value: 1 mg/m<sup>3</sup>  
S(D)

EV Long-term value: 2 mg/m<sup>3</sup>

### 1310-58-3 POTASSIUM HYDROXIDE

EL Ceiling limit value: 2 mg/m<sup>3</sup>

EV Ceiling limit value: 2 mg/m<sup>3</sup>

- **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 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

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Trade name: Kodak Polymax T Developer

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- **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:**

<b>Form:</b>	Liquid
<b>Color:</b>	Light brown
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

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

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	>100 °C

- **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:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

- **Vapor pressure at 20 °C:** 1.4 hPa

<b>Density at 20 °C:</b>	1.35 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

- **Solubility in / Miscibility with**

**Water:** Fully miscible.

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

- **Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

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Trade name: Kodak Polymax T Developer

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<b>· Solvent content:</b>	
Organic solvents:	1.0 %
Water:	91.9 %
<b>· Solids content:</b>	
Solids content:	1.0 %
<b>· Other information</b>	
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:**

### 123-31-9 hydroquinone

Oral	LD50	320 mg/kg (rat)
------	------	-----------------

### 1310-58-3 POTASSIUM HYDROXIDE

Oral	LD50	273 mg/kg (rat)
------	------	-----------------

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

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

- **Carcinogenic categories**

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

123-31-9	hydroquinone	3
----------	--------------	---

- **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.

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**Trade name: Kodak Polymax T Developer**

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- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |                                                                                                                                                             |                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, TDG, IMDG, IATA</b></li> </ul>                                                 | <p style="margin-left: 20px;">UN2209</p>                                                                           |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>TDG</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p style="margin-left: 20px;">Formaldehyde solutions<br/>2209 Formaldehyde solutions<br/>FORMALDEHYDE SOLUTION</p> |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>                                                 | <p style="margin-left: 20px;">8</p>                                                                                |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> <li>· <b>TDG, IMDG, IATA</b></li> </ul>                                  | <p style="margin-left: 20px;">8 Corrosive substances<br/>8</p>                                                     |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> </ul>                                                                                            | <p style="margin-left: 20px;">8 Corrosive substances</p>                                                           |

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· <b>Label</b>	8
· <b>Packing group</b>	
· <b>DOT, TDG, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Warning: Corrosive substances
· <b>Danger code (Kemler):</b>	80
· <b>EMS Number:</b>	F-A,S-B
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60
· <b>TDG</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 2209 FORMALDEHYDE SOLUTIONS, 8, III

## 15 Regulatory information

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

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

123-31-9 hydroquinone

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

123-31-9 hydroquinone

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

All ingredients are listed.

### · Canadian substance listings:

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

7647-15-6 sodium bromide

10117-38-1 Sulfurous acid, dipotassium salt

584-08-7 potassium carbonate

111-46-6 2,2'-oxybisethanol

1310-58-3 POTASSIUM HYDROXIDE

55-55-0 Metol

2654-58-2 4,4-dimethyl-1-phenyl-3-pyrazolidone

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**Trade name: Kodak Polymax T Developer**

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7732-18-5	Deionized Water, Reagent Grade A.C.S.
-----------	---------------------------------------

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

7647-15-6	sodium bromide
-----------	----------------

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

584-08-7	potassium carbonate
----------	---------------------

123-31-9	hydroquinone
----------	--------------

1310-58-3	POTASSIUM HYDROXIDE
-----------	---------------------

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

· **Hazard pictograms**



GHS07    GHS08

· **Signal word** Warning

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

4,4-dimethyl-1-phenyl-3-pyrazolidone

hydroquinone

Metol

POTASSIUM HYDROXIDE

· **Hazard statements**

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of causing cancer.

May cause damage to organs.

May cause damage to organs through prolonged or repeated exposure.

· **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.

Contaminated work clothing should not be allowed out of the workplace.

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

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

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

Continue rinsing.

**IF exposed or concerned:** Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see on this label).

If eye irritation persists: Get medical advice/attention.

Store locked up.

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

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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.*

· **Date of the latest revision of the safety data sheet** 09/06/2018 / -

· **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*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

CA

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

Printing date 06.09.2018

Revision: 06.09.2018

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

- **1.1 Product identifier**
- **Trade name:** Kodak Polymax T Developer
- **Article number:** 74232-01, 74232-12
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://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**



GHS08 health hazard

Muta. 2	H341 Suspected of causing genetic defects.
Carc. 2	H351 Suspected of causing cancer.
STOT SE 2	H371 May cause damage to organs.
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4	H302 Harmful if swallowed.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
.....	
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

- **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**



GHS07



GHS08

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**Trade name: Kodak Polymax T Developer**

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

hydroquinone

4,4-dimethyl-1-phenyl-3-pyrazolidone

Metol

POTASSIUM HYDROXIDE

· **Hazard statements**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H371 May cause damage to organs.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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

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: 584-08-7 EINECS: 209-529-3	potassium carbonate ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	≤2.5%
CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxybisethanol ⚠ Acute Tox. 4, H302	≤2.5%
CAS: 123-31-9 EINECS: 204-617-8	hydroquinone ⚠ Muta. 2, H341; Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2.5%
CAS: 1310-58-3 EINECS: 215-181-3	POTASSIUM HYDROXIDE ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	≤2.5%
CAS: 55-55-0 EINECS: 200-237-1	Metol ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2.5%
CAS: 2654-58-2 EINECS: 220-181-1	4,4-dimethyl-1-phenyl-3-pyrazolidone ⚠ Acute Tox. 3, H301	≤2.5%

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· **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:

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

##### · After inhalation:

Supply fresh air and to be sure call for a doctor.

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

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

##### · After eye contact:

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

##### · After swallowing: 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.

#### · 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 Not required.

#### · 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

#### · 6.3 Methods and material for containment and cleaning up:

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

#### · 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.

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- 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

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

#### · 8.1 Control parameters

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

##### **111-46-6 2,2'-oxybisethanol**

WEL	Long-term value: 101 mg/m <sup>3</sup> , 23 ppm
-----	-------------------------------------------------

##### **123-31-9 hydroquinone**

WEL	Long-term value: 0.5 mg/m <sup>3</sup>
-----	----------------------------------------

##### **1310-58-3 POTASSIUM HYDROXIDE**

WEL	Short-term value: 2 mg/m <sup>3</sup>
-----	---------------------------------------

- 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 and skin.

##### · Respiratory protection:

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

##### · Protection of hands:



Protective gloves

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

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

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

##### · Material of gloves

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

##### · Penetration time of glove material

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

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## · Eye protection:



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

## · 9.1 Information on basic physical and chemical properties

## · General Information

## · Appearance:

Form:	Liquid
Colour:	Light brown
Odour:	Odourless
Odour threshold:	Not determined.

· pH-value: Not determined.

## · Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	>100 °C

· 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 at 20 °C: 1.4 hPa

· Density at 20 °C: 1.35 g/cm<sup>3</sup>

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

## · Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

## · Solvent content:

Organic solvents:	1.0 %
Water:	91.9 %
VOC (EC)	1.01 %

Solids content: 1.0 %

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**· 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**  
Harmful if swallowed.

**· LD/LC50 values relevant for classification:****123-31-9 hydroquinone**

Oral LD50 320 mg/kg (rat)

**1310-58-3 POTASSIUM HYDROXIDE**

Oral LD50 273 mg/kg (rat)

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

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· **Ecotoxicological effects:**· **Remark:***Toxic for fish**Harmful to fish*· **Additional ecological information:**· **General notes:***Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.**Also poisonous for fish and plankton in water bodies.**Toxic for aquatic organisms**Harmful to aquatic organisms*· **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.· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· **14.1 UN-Number**· **ADR, IMDG, IATA**

UN2209

· **14.2 UN proper shipping name**· **ADR**

2209 FORMALDEHYDE SOLUTION

· **IMDG, IATA**

FORMALDEHYDE SOLUTION

· **14.3 Transport hazard class(es)**· **ADR, IMDG, IATA**· **Class**

8 Corrosive substances.

· **Label**

8

· **14.4 Packing group**· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Warning: Corrosive substances.

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

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· <b>Stowage Category</b>	A
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 2209 FORMALDEHYDE SOLUTION, 8, III

### 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.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **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**

- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances

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GB

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**Trade name: Kodak Polymax T Developer**

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*CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Acute toxicity – Category 3**Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1A: Skin corrosion/irritation – Category 1A**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Skin Sens. 1: Skin sensitisation – Category 1**Muta. 2: Germ cell mutagenicity – Category 2**Carc. 2: Carcinogenicity – Category 2**STOT SE 2: Specific target organ toxicity (single exposure) – Category 2**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

GB



# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 06.09.2018

Herziening van: 06.09.2018

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

#### · 1.1 Productidentificatie

· Handelsnaam: Kodak Polymax T Developer

· Artikelnummer: 74232-01, 74232-12

#### · 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](mailto:info@emsdiasum.com)

[www.emsdiasum.com](http://www.emsdiasum.com)

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: [info@aurion.nl](mailto: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



GHS08 gezondheidsgevaar

Muta. 2 H341 Verdacht van het veroorzaken van genetische schade.

Carc. 2 H351 Verdacht van het veroorzaken van kanker.

STOT SE 2 H371 Kan schade aan organen veroorzaken.

STOT RE 2 H373 Kan schade aan organen veroorzaken bij langdurige of herhaalde blootstelling.



GHS07

Acute Tox. 4 H302 Schadelijk bij inslikken.

Skin Irrit. 2 H315 Veroorzaakt huidirritatie.

Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

Aquatic Chronic 3 H412 Schadelijk voor in het water levende organismen, met langdurige gevolgen.

(Vervolg op blz. 2)

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Handelsnaam: Kodak Polymax T Developer

(Vervolg van blz. 1)

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



GHS07 GHS08

- **Signaalwoord** Waarschuwing
- **Gevaaraanduidende componenten voor de etikettering:**  
hydrochinon  
1-fenyl-4,4-dimethyl-3-pyrazolidon  
bis(4-hydroxy-N-methylanilinium)sulfaat  
kaliumhydroxide
- **Gevenaanduidingen**  
H302 Schadelijk bij inslikken.  
H315 Veroorzaakt huidirritatie.  
H319 Veroorzaakt ernstige oogirritatie.  
H317 Kan een allergische huidreactie veroorzaken.  
H341 Verdacht van het veroorzaken van genetische schade.  
H351 Verdacht van het veroorzaken van kanker.  
H371 Kan schade aan organen veroorzaken.  
H373 Kan schade aan organen veroorzaken bij langdurige of herhaalde blootstelling.  
H412 Schadelijk voor in het water levende organismen, met langdurige gevolgen.
- **Veiligheidsaanbevelingen**  
P260                   Stof/rook/gas/nevel/damp/spuitnevel niet inademen.  
P280                   Beschermdende handschoenen/beschermdende kleding/oogbescherming/gelaatsbescherming dragen.  
P301+P312           NA INSLIKKEN: bij onwel voelen een ANTIGIFCENTRUM/arts raadplegen.  
P305+P351+P338   BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.  
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: 584-08-7	kaliumcarbonaat	≤2,5%
EINECS: 209-529-3	⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	

(Vervolg op blz. 3)

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CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxydiethanol ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 123-31-9 EINECS: 204-617-8	hydrochinon ⚠ Muta. 2, H341; Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2,5%
CAS: 1310-58-3 EINECS: 215-181-3	kaliumhydroxide ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 55-55-0 EINECS: 200-237-1	bis(4-hydroxy-N-methylanilinium)sulfaat ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2,5%
CAS: 2654-58-2 EINECS: 220-181-1	1-fenyl-4,4-dimethyl-3-pyrazolidon ⚠ Acute Tox. 3, H301	≤2,5%

**· Aanvullende gegevens:**

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

### RUBRIEK 4: Eerstehulpmaatregelen

**· 4.1 Beschrijving van de eerstehulpmaatregelen**

**· Algemene informatie:**

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:**

Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

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

**· Na oogcontact:**

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

**· Na inslikken: Onmiddellijk arts raadplegen.**

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

**· 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

**· 5.1 Blusmiddelen**

**· Geschikte blusmiddelen:** 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, beschermde uitrusting en noodprocedures** Niet nodig.

**· 6.2 Milieuvorzorgsmaatregelen:**

Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.

Met veel water verdunnen.

Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

(Vervolg op blz. 4)

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(Vervolg van blz. 3)

- **6.3 Insluitings- en reinigingsmethoden en -materiaal:**  
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.  
Besmet materiaal zoals afval volgens punt 13 verwijderen.  
Voor voldoende ventilatie zorgen.
- **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

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**  
Het product bevat geen relevante hoeveelheden van stoffen, die met betrekking tot de werkplaatsen, qua grenswaarden gecontroleerd moeten worden.
- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**  
Verwijderd houden van eet- en drinkwaren.  
Verontreinigde kleding onmiddellijk uittrekken.  
Vóór de pauze en aan het einde van werktijd handen wassen.  
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 ademhalingstoestel 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.

(Vervolg op blz. 5)

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- **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:**

<b>Vorm:</b>	Vloeistof
<b>Kleur:</b>	Lichtbruin
<b>Geur:</b>	Reukloos
<b>Geurdrempelwaarde:</b>	Niet bepaald.

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

- **Toestandsverandering**

<b>Smelt-/vriespunt:</b>	Niet bepaald.
<b>Beginkookpunt en kooktraject:</b>	>100 °C

- **Vlampunt:** Niet bruikbaar.

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

- **Ontledingstemperatuur:** Niet bepaald.

- **Zelfontbrandingstemperatuur:** Het produkt ontbrandt niet uit zichzelf.

- **Ontploffingseigenschappen:** Het produkt is niet ontploffingsgevaarlijk.

- **Ontploffingsgrenzen:**

<b>Onderste:</b>	Niet bepaald.
<b>Bovenste:</b>	Niet bepaald.

- **Dampspanning bij 20 °C:** 1,4 hPa

<b>Dichtheid bij 20 °C:</b>	1,35 g/cm <sup>3</sup>
<b>Relatieve dichtheid</b>	Niet bepaald.
<b>Dampdichtheid</b>	Niet bepaald.
<b>Verdampingsnelheid</b>	Niet bepaald.

- **Oplosbaarheid in/mengbaarheid met**

**Water:** Volledig mengbaar.

- **Verdelingscoëfficiënt: n-octanol/water:** Niet bepaald.

- **Viscositeit**

<b>Dynamisch:</b>	Niet bepaald.
<b>Kinematisch:</b>	Niet bepaald.

(Vervolg op blz. 6)

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<b>· Oplosmiddelgehalte:</b>	
<b>Organisch oplosmiddel:</b>	1,0 %
<b>Water:</b>	91,9 %
<b>VOC (EG)</b>	1,01 %
<b>Gehalte aan vaste bestanddelen:</b> 1,0 %	
<b>· 9.2 Overige informatie</b>	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**  
Schadelijk bij inslikken.

**· Indelingsrelevantie LD/LC50-waarden:**
**123-31-9 hydrochinon**

Oraal	LD50	320 mg/kg (rat)
-------	------	-----------------

**1310-58-3 kaliumhydroxide**

Oraal	LD50	273 mg/kg (rat)
-------	------	-----------------

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**  
Veroorzaakt huidirritatie.
- **Ernstig oogletsel/oogirritatie**  
Veroorzaakt ernstige oogirritatie.
- **Sensibilisatie van de luchtwegen/de huid**  
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen**  
Verdacht van het veroorzaken van genetische schade.
- **Kankerverwekkendheid**  
Verdacht van het veroorzaken van kanker.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling**  
Kan schade aan organen veroorzaken.
- **STOT bij herhaalde blootstelling**  
Kan schade aan organen veroorzaken bij langdurige of herhaalde blootstelling.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

(Vervolg op blz. 7)

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### 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.
- **Ecotoxische effecten:**
- **Opmerking:**  
Giffig voor vissen.  
Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL): A(2) vergiftig voor in water levende organismen kan in het aquatische milieu op lange termijn schadelijke effecten veroorzaken  
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein  
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.  
In oppervlaktewater ook giffig voor vissen en plankton.  
giffig voor in het water levende organismen  
schadelijk voor in het water levende organismen
- **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.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

### RUBRIEK 14: Informatie met betrekking tot het vervoer

- |                                                                                     |                              |
|-------------------------------------------------------------------------------------|------------------------------|
| · <b>14.1 VN-nummer</b>                                                             | UN2209                       |
| · <b>ADR, IMDG, IATA</b>                                                            |                              |
| · <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b>        |                              |
| · <b>ADR</b>                                                                        | 2209 FORMALDEHYDE, OPLOSSING |
| · <b>IMDG, IATA</b>                                                                 | FORMALDEHYDE SOLUTION        |
| · <b>14.3 Transportgevaarenklasse(n)</b>                                            |                              |
| · <b>ADR, IMDG, IATA</b>                                                            |                              |
|  |                              |
| · <b>klasse</b>                                                                     | 8 Bijtende stoffen           |
| · <b>Etiket</b>                                                                     | 8                            |

(Vervolg op blz. 8)

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· <b>14.4 Verpakkingsgroep:</b> · <b>ADR, IMDG, IATA</b>	<b>III</b>
· <b>14.5 Milieugevaren:</b>	<i>Niet bruikbaar.</i>
· <b>14.6 Bijzondere voorzorgen voor de gebruiker</b> · <b>Kemler-getal:</b> · <b>EMS-nummer:</b> · <b>Stowage Category</b>	<i>Waarschuwing: Bijtende stoffen</i> 80 F-A,S-B A
· <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b>	<i>Niet bruikbaar.</i>
· <b>Transport/verdere gegevens:</b>	
· <b>ADR</b> · <b>Beperkte hoeveelheden (LQ)</b> · <b>Uitgezonderde hoeveelheden (EQ)</b>	5L Code: E1 Grootste netto hoeveelheid per binnenverpakking: 30 ml Grootste netto hoeveelheid per buitenverpakking: 1000 ml
· <b>Vervoerscategorie</b> · <b>Tunnelbeperkingscode</b>	3 E
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>VN "Model Regulation":</b>	<i>UN 2209 FORMALDEHYDE, OPLOSSING, 8, III</i>

### **RUBRIEK 15: Regelgeving**

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

· **SZW-lijst van kankerverwekkende stoffen**

*geen der bestanddelen staat op de lijst.*

· **SZW-lijst van mutagene stoffen**

*geen der bestanddelen staat op de lijst.*

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

*geen der bestanddelen staat op de lijst.*

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

*geen der bestanddelen staat op de lijst.*

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

*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.

· **Verordening (EG) nr. 1907/2006 BIJLAGE XVII** Beperkingsvoorwaarden: 3

· **Nationale voorschriften:**

· **Gevaarklasse v. water:**

*Waterbezwaarlijkheid (NL): A(2) vergiftig voor in water levende organismen kan in het aquatische milieu op lange termijn schadelijke effecten veroorzaken*

(Vervolg op blz. 9)



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## volgens 1907/2006/EG, Artikel 31

datum van de druk: 06.09.2018

Herziening van: 06.09.2018

**Handelsnaam: Kodak Polymax T Developer**

(Vervolg van blz. 8)

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

### RUBRIEK 16: Overige informatie

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

· **Relevante zinnen**

H301 Giftig bij inslikken.

H302 Schadelijk bij inslikken.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H317 Kan een allergische huidreactie veroorzaken.

H318 Veroorzaakt ernstig oogletsel.

H319 Veroorzaakt ernstige oogirritatie.

H341 Verdacht van het veroorzaken van genetische schade.

H351 Verdacht van het veroorzaken van kanker.

H373 Kan schade aan organen veroorzaken bij langdurige of herhaalde blootstelling.

H400 Zeer giftig voor in het water levende organismen.

H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.

· **Afkortingen en acroniemen:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxiciteit – Categorie 3

Acute Tox. 4: Acute toxiciteit – Categorie 4

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

Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2

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

Eye Irrit. 2: Ernstig oogletsel/oogirritatie – Categorie 2

Skin Sens. 1: Sensibilisatie van de huid – Categorie 1

Muta. 2: Mutageniteit in geslachtscellen – Categorie 2

Carc. 2: Kankerverwekkendheid – Categorie 2

STOT SE 2: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 2

STOT RE 2: Specifieke doelorgaantoxiciteit bij herhaalde blootstelling – Categorie 2

Aquatic Acute 1: Gevaar voor het aquatisch milieu - acuut aquatisch gevaar – Categorie 1

Aquatic Chronic 1: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 1

Aquatic Chronic 3: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 3

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 06.09.2018

Révision: 06.09.2018

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

- **1.1 Identificateur de produit**
- **Nom du produit:** Kodak Polymax T Developer
- **Code du produit:** 74232-01, 74232-12
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://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**



GHS08 danger pour la santé

Muta. 2	H341 Susceptible d'induire des anomalies génétiques.
Carc. 2	H351 Susceptible de provoquer le cancer.
STOT SE 2	H371 Risque présumé d'effets graves pour les organes.
STOT RE 2	H373 Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.



GHS07

Acute Tox. 4	H302 Nocif en cas d'ingestion.
Skin Irrit. 2	H315 Provoque une irritation cutanée.
Eye Irrit. 2	H319 Provoque une sévère irritation des yeux.
Skin Sens. 1	H317 Peut provoquer une allergie cutanée.
.....	
Aquatic Chronic 3	H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.

- **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**



GHS07



GHS08

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# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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**Nom du produit: Kodak Polymax T Developer**

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· **Mention d'avertissement** Attention

· **Composants dangereux déterminants pour l'étiquetage:**

1,4-dihydroxybenzène  
 4,4-diméthyl-1-phényl-3-pyrazolidone  
 sulfate de bis(4-hydroxy-N-méthylanilinium)  
 hydroxyde de potassium

· **Mentions de danger**

H302 Nocif en cas d'ingestion.  
 H315 Provoque une irritation cutanée.  
 H319 Provoque une sévère irritation des yeux.  
 H317 Peut provoquer une allergie cutanée.  
 H341 Susceptible d'induire des anomalies génétiques.  
 H351 Susceptible de provoquer le cancer.  
 H371 Risque présumé d'effets graves pour les organes.  
 H373 Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.  
 H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.

· **Conseils de prudence**

P260 Ne pas respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.  
 P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.  
 P301+P312 EN CAS D'INGESTION: Appeler un CENTRE ANTIPOISON/un médecin en cas de malaise.  
 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.  
 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: 584-08-7 EINECS: 209-529-3	carbonate de potassium ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	≤2,5%
CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxydiéthanol ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 123-31-9 EINECS: 204-617-8	1,4-dihydroxybenzène ⚠ Muta. 2, H341; Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2,5%
CAS: 1310-58-3 EINECS: 215-181-3	hydroxyde de potassium ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 55-55-0 EINECS: 200-237-1	sulfate de bis(4-hydroxy-N-méthylanilinium) ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2,5%

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**Nom du produit: Kodak Polymax T Developer**


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CAS: 2654-58-2

4,4-diméthyl-1-phényl-3-pyrazolidone

≤2,5%

EINECS: 220-181-1

 Acute Tox. 3, H301

· **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:**

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:**

Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.

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

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

· **Après contact avec les yeux:**

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

· **Après ingestion:** 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.

### 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**

· **Equipement 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** Pas nécessaire.

· **6.2 Précautions pour la protection de l'environnement:**

En cas de pénétration dans les eaux ou les égouts, avertir les autorités compétentes.

Diluer avec beaucoup d'eau.

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

· **6.3 Méthodes et matériel de confinement et de nettoyage:**

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

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

Assurer une aération suffisante.

· **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.

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Nom du produit: **Kodak Polymax T Developer**

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### 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.  
Eviter 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

- **Indications complémentaires pour l'agencement des installations techniques:**  
Sans autre indication, voir point 7.

- **8.1 Paramètres de contrôle**

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

#### 123-31-9 1,4-dihydroxybenzène

VME	Valeur à long terme: 2 mg/m <sup>3</sup>
	C2, M2

#### 1310-58-3 hydroxyde de potassium

VME	Valeur momentanée: 2 mg/m <sup>3</sup>
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- **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 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.

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**Nom du produit: Kodak Polymax T Developer**

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- **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:	Brun clair
Odeur:	Inodore
Seuil olfactif:	Non déterminé.

· valeur du pH: Non déterminé.

##### · Changement d'état

Point de fusion/point de congélation:	Non déterminé.
Point initial d'ébullition et intervalle d'ébullition:	>100 °C

· 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 à 20 °C: 1,4 hPa

· Densité à 20 °C: 1,35 g/cm<sup>3</sup>

· Densité relative Non déterminé.

· Densité de vapeur: Non déterminé.

· Taux d'évaporation: Non déterminé.

##### · Solubilité dans/miscibilité avec

l'eau: Entièrement miscible

· Coefficient de partage: n-octanol/eau: Non déterminé.

##### · Viscosité:

Dynamique:	Non déterminé.
Cinématique:	Non déterminé.

##### · Teneur en solvants:

Solvants organiques:	1,0 %
Eau:	91,9 %
VOC (CE)	1,01 %

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**Nom du produit: Kodak Polymax T Developer**

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<b>Teneur en substances solides:</b>	1,0 %
<b>9.2 Autres informations</b>	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**  
Nocif en cas d'ingestion.

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

#### 123-31-9 1,4-dihydroxybenzène

Oral	LD50	320 mg/kg (rat)
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#### 1310-58-3 hydroxyde de potassium

Oral	LD50	273 mg/kg (rat)
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- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
Provoque une irritation cutanée.
- **Lésions oculaires graves/irritation oculaire**  
Provoque une sévère irritation des yeux.
- **Sensibilisation respiratoire ou cutanée**  
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**  
Susceptible d'induire des anomalies génétiques.
- **Cancérogénicité**  
Susceptible de provoquer le cancer.
- **Toxicité pour la reproduction**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
Risque présumé d'effets graves pour les organes.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.
- **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.

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- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Effets écotoxiques:**
- **Remarque:**  
Toxique chez les poissons.  
Nocif pour les poissons.
- **Autres indications écologiques:**
- **Indications générales:**  
Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant  
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.  
Dans les eaux, également toxique pour les poissons et le plancton.  
Toxique pour les organismes aquatiques.  
Nocif pour les organismes aquatiques.
- **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.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

### RUBRIQUE 14: Informations relatives au transport

- |                                                                                                                                                                 |                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>· <b>14.1 Numéro ONU</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                                    | <p style="text-align: center;">UN2209</p>                                                                                                                         |
| <ul style="list-style-type: none"> <li>· <b>14.2 Désignation officielle de transport de l'ONU</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p style="text-align: center;">2209 FORMALDÉHYDE EN SOLUTION<br/>FORMALDEHYDE SOLUTION</p>                                                                        |
| <ul style="list-style-type: none"> <li>· <b>14.3 Classe(s) de danger pour le transport</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                         | <div style="text-align: center;">  </div> <p style="text-align: center;">8</p> |
| <ul style="list-style-type: none"> <li>· <b>Classe</b></li> <li>· <b>Étiquette</b></li> </ul>                                                                   | <p style="text-align: center;">8 Matières corrosives.<br/>8</p>                                                                                                   |
| <ul style="list-style-type: none"> <li>· <b>14.4 Groupe d'emballage</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                            | <p style="text-align: center;">III</p>                                                                                                                            |
| <ul style="list-style-type: none"> <li>· <b>14.5 Dangers pour l'environnement:</b></li> </ul>                                                                   | <p style="text-align: center;">Non applicable.</p>                                                                                                                |
| <ul style="list-style-type: none"> <li>· <b>14.6 Précautions particulières à prendre par l'utilisateur</b></li> </ul>                                           | <p style="text-align: center;">Attention: Matières corrosives.</p>                                                                                                |

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· <b>Indice Kemler:</b>	80
· <b>No EMS:</b>	F-A,S-B
· <b>Stowage Category</b>	A
· <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</b>	Non applicable.
· <b>Indications complémentaires de transport:</b>	
· <b>ADR</b>	
· <b>Quantités limitées (LQ)</b>	5L
· <b>Quantités exceptées (EQ)</b>	Code: E1 Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 1000 ml
· <b>Catégorie de transport</b>	3
· <b>Code de restriction en tunnels</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>"Règlement type" de l'ONU:</b>	UN 2209 FORMALDÉHYDE EN SOLUTION, 8, III

### 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
- **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**
- H301 Toxique en cas d'ingestion.
- H302 Nocif en cas d'ingestion.
- H314 Provoque des brûlures de la peau et des lésions oculaires graves.
- H317 Peut provoquer une allergie cutanée.
- H318 Provoque des lésions oculaires graves.
- H319 Provoque une sévère irritation des yeux.
- H341 Susceptible d'induire des anomalies génétiques.
- H351 Susceptible de provoquer le cancer.
- H373 Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.
- H400 Très toxique pour les organismes aquatiques.
- H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.
- **Acronymes et abréviations:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route

(suite page 9)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 06.09.2018

Révision: 06.09.2018

**Nom du produit: Kodak Polymax T Developer**

(suite de la page 8)

*IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Toxicité aiguë – Catégorie 3**Acute Tox. 4: Toxicité aiguë – Catégorie 4**Skin Corr. 1A: Corrosion cutanée/irritation cutanée – Catégorie 1A**Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2**Eye Dam. 1: Lésions oculaires graves/irritation oculaire – Catégorie 1**Eye Irrit. 2: Lésions oculaires graves/irritation oculaire – Catégorie 2**Skin Sens. 1: Sensibilisation cutanée – Catégorie 1**Muta. 2: Mutagénicité sur les cellules germinales – Catégorie 2**Carc. 2: Cancérogénicité – Catégorie 2**STOT SE 2: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 2**STOT RE 2: Toxicité spécifique pour certains organes cibles (exposition répétée) – Catégorie 2**Aquatic Acute 1: Dangers pour le milieu aquatique- toxicité aiguë pour le milieu aquatique – Catégorie 1**Aquatic Chronic 1: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 1**Aquatic Chronic 3: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 3*

FR

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 06.09.2018

überarbeitet am: 06.09.2018

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

- **1.1 Produktidentifikator**
- **Handelsname:** Kodak Polymax T Developer
- **Artikelnummer:** 74232-01, 74232-12
- **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
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

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



GHS08 Gesundheitsgefahr

- |           |  |                                                                           |
|-----------|--|---------------------------------------------------------------------------|
| Muta. 2   |  | H341 Kann vermutlich genetische Defekte verursachen.                      |
| Carc. 2   |  | H351 Kann vermutlich Krebs erzeugen.                                      |
| STOT SE 2 |  | H371 Kann die Organe schädigen.                                           |
| STOT RE 2 |  | H373 Kann die Organe schädigen bei längerer oder wiederholter Exposition. |



GHS07

- |               |  |                                                   |
|---------------|--|---------------------------------------------------|
| Acute Tox. 4  |  | H302 Gesundheitsschädlich bei Verschlucken.       |
| Skin Irrit. 2 |  | H315 Verursacht Hautreizungen.                    |
| Eye Irrit. 2  |  | H319 Verursacht schwere Augenreizung.             |
| Skin Sens. 1  |  | H317 Kann allergische Hautreaktionen verursachen. |

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

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**Handelsname: Kodak Polymax T Developer**

(Fortsetzung von Seite 1)

*Aquatic Chronic 3 H412* Schädlich für Wasserorganismen, mit langfristiger Wirkung.

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



GHS07 GHS08

- **Signalwort** Achtung
- **Gefahrbestimmende Komponenten zur Etikettierung:**  
1,4-Dihydroxybenzol  
4,4-Dimethyl-1-phenyl-3-pyrazolidon  
Bis(4-hydroxy-N-methylanilinium)sulfat  
Kaliumhydroxid
- **Gefahrenhinweise**  
H302 Gesundheitsschädlich bei Verschlucken.  
H315 Verursacht Hautreizungen.  
H319 Verursacht schwere Augenreizung.  
H317 Kann allergische Hautreaktionen verursachen.  
H341 Kann vermutlich genetische Defekte verursachen.  
H351 Kann vermutlich Krebs erzeugen.  
H371 Kann die Organe schädigen.  
H373 Kann die Organe schädigen bei längerer oder wiederholter Exposition.  
H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.
- **Sicherheitshinweise**  
P260 Staub/Rauch/Gas/Nebel/Dampf/Aerosol nicht einatmen.  
P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.  
P301+P312 BEI VERSCHLUCKEN: Bei Unwohlsein GIFTINFORMATIONSZENTRUM/Arzt anrufen.  
P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen.  
Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.  
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: 584-08-7	Pottasche	≤2,5%
EINECS: 209-529-3	⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	

(Fortsetzung auf Seite 3)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

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**Handelsname: Kodak Polymax T Developer**

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CAS: 111-46-6 EINECS: 203-872-2	2,2'-Oxydiethanol ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 123-31-9 EINECS: 204-617-8	1,4-Dihydroxybenzol ⚠ Muta. 2, H341; ⚠ Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; ⚠ Skin Sens. 1, H317	≤2,5%
CAS: 1310-58-3 EINECS: 215-181-3	Kaliumhydroxid ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 55-55-0 EINECS: 200-237-1	Bis(4-hydroxy-N-methylanilinium)sulfat ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; ⚠ Skin Sens. 1, H317	≤2,5%
CAS: 2654-58-2 EINECS: 220-181-1	4,4-Dimethyl-1-phenyl-3-pyrazolidon ⚠ Acute Tox. 3, H301	≤2,5%

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

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

#### · 4.1 Beschreibung der Erste-Hilfe-Maßnahmen

##### · Allgemeine Hinweise:

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

##### · Nach Einatmen:

Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.

Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

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

##### · Nach Augenkontakt:

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

##### · Nach Verschlucken: Sofort Arzt aufsuchen.

#### · 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**  
Nicht erforderlich.

#### · 6.2 Umweltschutzmaßnahmen:

Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.

Mit viel Wasser verdünnen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

(Fortsetzung auf Seite 4)

# Sicherheitsdatenblatt

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**Handelsname: Kodak Polymax T Developer**

(Fortsetzung von Seite 3)

- **6.3 Methoden und Material für Rückhaltung und Reinigung:**  
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.  
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.  
Für ausreichende Lüftung sorgen.
- **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 Betriebsicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

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

#### · 8.1 Zu überwachende Parameter

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

#### 111-46-6 2,2'-Oxydiethanol

AGW	Langzeitwert: 44 mg/m <sup>3</sup> , 10 ml/m <sup>3</sup> 4(II);DFG, Y, 11
-----	-------------------------------------------------------------------------------

#### 123-31-9 1,4-Dihydroxybenzol

MAK	als Dampf und Aerosol
-----	-----------------------

- **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 und der Haut vermeiden.

##### · **Atemschutz:**

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

(Fortsetzung auf Seite 5)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

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**Handelsname: Kodak Polymax T Developer**

(Fortsetzung von Seite 4)

**· 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

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

**· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**
**· Allgemeine Angaben**
**· Aussehen:**

**Form:** Flüssigkeit

**Farbe:** Hellbraun

**· Geruch:** Geruchlos

**· Geruchsschwelle:** Nicht bestimmt.

**· pH-Wert:** Nicht bestimmt.

**· Zustandsänderung**

**Schmelzpunkt/Gefrierpunkt:** Nicht bestimmt.

**Siedebeginn und Siedebereich:** >100 °C

**· 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 bei 20 °C:** 1,4 hPa

**· Dichte bei 20 °C:** 1,35 g/cm<sup>3</sup>

(Fortsetzung auf Seite 6)

# Sicherheitsdatenblatt

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(Fortsetzung von Seite 5)

· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht bestimmt.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.
· <b>Löslichkeit in / Mischbarkeit mit Wasser:</b>	Vollständig mischbar.
· <b>Verteilungskoeffizient: n-Octanol/Wasser:</b>	Nicht bestimmt.
· <b>Viskosität:</b>	
<b>Dynamisch:</b>	Nicht bestimmt.
<b>Kinematisch:</b>	Nicht bestimmt.
· <b>Lösemittelgehalt:</b>	
<b>Organische Lösemittel:</b>	1,0 %
<b>Wasser:</b>	91,9 %
<b>VOC (EU)</b>	1,01 %
· <b>Festkörpergehalt:</b>	1,0 %
· <b>9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

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

### ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität**  
Gesundheitsschädlich bei Verschlucken.

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

**123-31-9 1,4-Dihydroxybenzol**

Oral	LD50	320 mg/kg (rat)
------	------	-----------------

**1310-58-3 Kaliumhydroxid**

Oral	LD50	273 mg/kg (rat)
------	------	-----------------

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**  
Verursacht Hautreizungen.
- **Schwere Augenschädigung/-reizung**  
Verursacht schwere Augenreizung.
- **Sensibilisierung der Atemwege/Haut**  
Kann allergische Hautreaktionen verursachen.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität**  
Kann vermutlich genetische Defekte verursachen.

(Fortsetzung auf Seite 7)



# Sicherheitsdatenblatt

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**Handelsname: Kodak Polymax T Developer**

(Fortsetzung von Seite 6)

- **Karzinogenität**  
Kann vermutlich Krebs erzeugen.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Kann die Organe schädigen.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**  
Kann die Organe schädigen bei längerer oder wiederholter Exposition.
- **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.
- **Ökotoxische Wirkungen:**
- **Bemerkung:**  
Giftig für Fische.  
Schädlich für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**  
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend  
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.  
In Gewässern auch giftig für Fische und Plankton.  
giftig für Wasserorganismen  
schädlich für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

### ABSCHNITT 14: Angaben zum Transport

- |                                                    |                        |
|----------------------------------------------------|------------------------|
| · <b>14.1 UN-Nummer</b>                            |                        |
| · <b>ADR, IMDG, IATA</b>                           | UN2209                 |
| · <b>14.2 Ordnungsgemäße UN-Versandbezeichnung</b> |                        |
| · <b>ADR</b>                                       | 2209 FORMALDEHYDLÖSUNG |
| · <b>IMDG, IATA</b>                                | FORMALDEHYDE SOLUTION  |

(Fortsetzung auf Seite 8)

# Sicherheitsdatenblatt

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(Fortsetzung von Seite 7)

· **14.3 Transportgefahrenklassen**

· ADR, IMDG, IATA



· Klasse 8 Ätzende Stoffe  
 · Gefahrzettel 8

· **14.4 Verpackungsgruppe**

· ADR, IMDG, IATA III

· **14.5 Umweltgefahren:** Nicht anwendbar.

· **14.6 Besondere Vorsichtsmaßnahmen für den Verwender**

· Achtung: Ätzende Stoffe  
 · Kemler-Zahl: 80  
 · EMS-Nummer: F-A,S-B  
 · Stowage Category A

· **14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code** Nicht anwendbar.

· **Transport/weitere Angaben:**

· ADR  
 · Begrenzte Menge (LQ) 5L  
 · Freigestellte Mengen (EQ) Code: E1  
 Höchste Nettomenge je Innenverpackung: 30 ml  
 Höchste Nettomenge je Außenverpackung: 1000 ml  
 · Beförderungskategorie 3  
 · Tunnelbeschränkungscode E

· **IMDG**

· Limited quantities (LQ) 5L  
 · Excepted quantities (EQ) Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation": UN 2209 FORMALDEHYDLÖSUNG, 8, III

### 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

· Nationale Vorschriften:

· Technische Anleitung Luft:

Klasse	Anteil in %
Wasser	91,9
I	2,0
NK	1,0

(Fortsetzung auf Seite 9)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 06.09.2018

überarbeitet am: 06.09.2018

**Handelsname: Kodak Polymax T Developer**

(Fortsetzung von Seite 8)

- **Wassergefährdungsklasse: WGK 1 (Selbsteinstufung):** schwach wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### ABSCHNITT 16: Sonstige Angaben

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

- **Relevante Sätze**

H301 Giftig bei Verschlucken.

H302 Gesundheitsschädlich bei Verschlucken.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H318 Verursacht schwere Augenschäden.

H319 Verursacht schwere Augenreizung.

H341 Kann vermutlich genetische Defekte verursachen.

H351 Kann vermutlich Krebs erzeugen.

H373 Kann die Organe schädigen bei längerer oder wiederholter Exposition.

H400 Sehr giftig für Wasserorganismen.

H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.

- **Abkürzungen und Akronyme:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akute Toxizität – Kategorie 3

Acute Tox. 4: Akute Toxizität – Kategorie 4

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

Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2

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

Eye Irrit. 2: Schwere Augenschädigung/Augenreizung – Kategorie 2

Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1

Muta. 2: Keimzellmutagenität – Kategorie 2

Carc. 2: Karzinogenität – Kategorie 2

STOT SE 2: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 2

STOT RE 2: Spezifische Zielorgan-Toxizität (wiederholte Exposition) – Kategorie 2

Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1

Aquatic Chronic 1: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 1

Aquatic Chronic 3: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 3

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

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Kodak Polymax T Developer

· **Articolo numero:** 74232-01, 74232-12

· **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](mailto:info@emsdiasum.com)

[www.emsdiasum.com](http://www.emsdiasum.com)

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: [www.sichim.com](http://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**



GHS08 pericolo per la salute

Muta. 2

H341 Sospettato di provocare alterazioni genetiche.

Carc. 2

H351 Sospettato di provocare il cancro.

STOT SE 2

H371 Può provocare danni agli organi.

STOT RE 2

H373 Può provocare danni agli organi in caso di esposizione prolungata o ripetuta.



GHS07

Acute Tox. 4

H302 Nocivo se ingerito.

Skin Irrit. 2

H315 Provoca irritazione cutanea.

Eye Irrit. 2

H319 Provoca grave irritazione oculare.

Skin Sens. 1

H317 Può provocare una reazione allergica cutanea.

Aquatic Chronic 3 H412 Nocivo per gli organismi acquatici con effetti di lunga durata.

· **2.2 Elementi dell'etichetta**

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

(continua a pagina 2)

**Scheda di dati di sicurezza**  
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Denominazione commerciale: **Kodak Polymax T Developer**

(Segue da pagina 1)

· **Pittogrammi di pericolo**

GHS07 GHS08

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

1,4-idrossibenzene  
1-fenil-4,4-dimetil-3-pirazolidone  
solfato di bis(4-idrossi-N-metilnilinio)  
idrossido di potassio

· **Indicazioni di pericolo**

H302 Nocivo se ingerito.  
H315 Provoca irritazione cutanea.  
H319 Provoca grave irritazione oculare.  
H317 Può provocare una reazione allergica cutanea.  
H341 Sospettato di provocare alterazioni genetiche.  
H351 Sospettato di provocare il cancro.  
H371 Può provocare danni agli organi.  
H373 Può provocare danni agli organi in caso di esposizione prolungata o ripetuta.  
H412 Nocivo per gli organismi acquatici con effetti di lunga durata.

· **Consigli di prudenza**

P260 Non respirare la polvere/i fumi/i gas/la nebbia/i vapori/gli aerosol.  
P280 Indossare guanti/indumenti protettivi/Proteggere gli occhi/il viso.  
P301+P312 IN CASO DI INGESTIONE: contattare un CENTRO ANTIVELENI/un medico in caso di malessere.  
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.  
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: 584-08-7 EINECS: 209-529-3	carbonato di potassio ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	≤2,5%
CAS: 111-46-6 EINECS: 203-872-2	2,2'-ossidietanolo ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 123-31-9 EINECS: 204-617-8	1,4-idrossibenzene ⚠ Muta. 2, H341; Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤2,5%

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CAS: 1310-58-3 EINECS: 215-181-3	idrossido di potassio Skin Corr. 1A, H314; Acute Tox. 4, H302	≤2,5%
CAS: 55-55-0 EINECS: 200-237-1	solfato di bis(4-idrossi-N-metilnilinio) STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	≤2,5%
CAS: 2654-58-2 EINECS: 220-181-1	1-fenil-4,4-dimetil-3-pirazolidone Acute Tox. 3, H301	≤2,5%

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

#### SEZIONE 4: Misure di primo soccorso

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

· **Indicazioni generali:**

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:**

Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.

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

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

· **Contatto con gli occhi:**

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

· **Ingestione:** Chiamare subito il medico.

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

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

Non sono disponibili altre informazioni.

#### SEZIONE 5: Misure antincendio

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:** 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** Non necessario.

· **6.2 Precauzioni ambientali:**

In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.

Diluire abbondantemente con acqua.

Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.

· **6.3 Metodi e materiali per il contenimento e per la bonifica:**

Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad una manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

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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

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

#### 8.1 Parametri di controllo

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

#### 123-31-9 1,4-idrossibenzene

TWA	Valore a lungo termine: 1 mg/m <sup>3</sup>
A3, sen	

#### 1310-58-3 idrossido di potassio

TWA	Limite Ceiling: 2 mg/m <sup>3</sup>
-----	-------------------------------------

- **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 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

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- **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:** Marrone chiaro

· **Odore:** Inodore

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non definito.

##### · Cambiamento di stato

**Punto di fusione/punto di congelamento:** Non definito.

**Punto di ebollizione iniziale e intervallo di ebollizione:** >100 °C

· **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 a 20 °C:** 1,4 hPa

· **Densità a 20 °C:** 1,35 g/cm<sup>3</sup>

· **Densità relativa** Non definito.

· **Densità di vapore:** Non definito.

· **Velocità di evaporazione** Non definito.

· **Solubilità in/Miscibilità con acqua:**

Completamente miscibile.

· **Coefficiente di ripartizione: n-ottanolo/acqua:** Non definito.

##### · Viscosità:

**Dinamica:** Non definito.

**Cinematica:** Non definito.

##### · Tenore del solvente:

**Solventi organici:** 1,0 %

**Acqua:** 91,9 %

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<b>VOC (CE)</b>	1,01 %
<b>Contenuto solido:</b>	1,0 %
<b>9.2 Altre informazioni</b>	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**  
Nocivo se ingerito.

· <b>Valori LD/LC50 rilevanti per la classificazione:</b>		
<b>123-31-9 1,4-idrossibenzene</b>		
Orale	LD50	320 mg/kg (rat)
<b>1310-58-3 idrossido di potassio</b>		
Orale	LD50	273 mg/kg (rat)

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

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- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:**  
Tossico per i pesci.  
Nocivo per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.  
Tossico per pesci e plancton.  
tossico per gli organismi acquatici  
nocivo per gli organismi acquatici
- **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.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

### SEZIONE 14: Informazioni sul trasporto

- |                                                                                                                                                                          |                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>· <b>14.1 Numero ONU</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                                             | UN2209                                                                                                                       |
| <ul style="list-style-type: none"> <li>· <b>14.2 Nome di spedizione dell'ONU</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>                           | 2209 FORMALDEIDE IN SOLUZIONE<br>FORMALDEHYDE SOLUTION                                                                       |
| <ul style="list-style-type: none"> <li>· <b>14.3 Classi di pericolo connesso al trasporto</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                               | <div style="text-align: center;">  </div> |
| <ul style="list-style-type: none"> <li>· <b>Classe</b></li> <li>· <b>Etichetta</b></li> </ul>                                                                            | 8 Materie corrosive<br>8                                                                                                     |
| <ul style="list-style-type: none"> <li>· <b>14.4 Gruppo di imballaggio</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                                  | III                                                                                                                          |
| <ul style="list-style-type: none"> <li>· <b>14.5 Pericoli per l'ambiente:</b></li> </ul>                                                                                 | Non applicabile.                                                                                                             |
| <ul style="list-style-type: none"> <li>· <b>14.6 Precauzioni speciali per gli utilizzatori</b></li> <li>· <b>Numero Kemler:</b></li> <li>· <b>Numero EMS:</b></li> </ul> | Attenzione: Materie corrosive<br>80<br>F-A,S-B                                                                               |

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· <b>Stowage Category</b>	A
· <b>14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC</b>	Non applicabile.
· <b>Trasporto/ulteriori indicazioni:</b>	
· <b>ADR</b>	
· <b>Quantità limitate (LQ)</b>	5L
· <b>Quantità esenti (EQ)</b>	Codice: E1 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 1000 ml
· <b>Categoria di trasporto</b>	3
· <b>Codice di restrizione in galleria</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 2209 FORMALDEIDE IN SOLUZIONE, 8, III

### 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

· **Disposizioni nazionali:**

· **Istruzione tecnica aria:**

Classe	quota in %
NC	1,0

- **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.

· **Fraasi rilevanti**

H301 Tossico se ingerito.

H302 Nocivo se ingerito.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

H317 Può provocare una reazione allergica cutanea.

H318 Provoca gravi lesioni oculari.

H319 Provoca grave irritazione oculare.

H341 Sospettato di provocare alterazioni genetiche.

H351 Sospettato di provocare il cancro.

H373 Può provocare danni agli organi in caso di esposizione prolungata o ripetuta.

H400 Molto tossico per gli organismi acquatici.

H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.

(continua a pagina 9)

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

Stampato il: 06.09.2018

Revisione: 06.09.2018

**Denominazione commerciale: Kodak Polymax T Developer**

(Segue da pagina 8)

**· Abbreviazioni e acronimi:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*  
*IMDG: International Maritime Code for Dangerous Goods*  
*IATA: International Air Transport Association*  
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Acute Tox. 3: Tossicità acuta – Categoria 3*  
*Acute Tox. 4: Tossicità acuta – Categoria 4*  
*Skin Corr. 1A: Corrosione/irritazione della pelle – Categoria 1A*  
*Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2*  
*Eye Dam. 1: Gravi lesioni oculari/irritazione oculare – Categoria 1*  
*Eye Irrit. 2: Gravi lesioni oculari/irritazione oculare – Categoria 2*  
*Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1*  
*Muta. 2: Mutagenicità sulle cellule germinali – Categoria 2*  
*Carc. 2: Cancerogenicità – Categoria 2*  
*STOT SE 2: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 2*  
*STOT RE 2: Tossicità specifica per organi bersaglio (esposizione ripetuta) – Categoria 2*  
*Aquatic Acute 1: Pericoloso per l'ambiente acquatico - pericolo acuto per l'ambiente acquatico – Categoria 1*  
*Aquatic Chronic 1: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 1*  
*Aquatic Chronic 3: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 3*

IT



# 물질안전보건자료

## GHS에 따라

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(1 쪽부터 계속)

피부 과민성 - 구분 1 H317 알레르기성 피부 반응을 일으킬 수 있음

수생환경 유해성 - 만성3 H412 장기적인 영향에 의해 수생생물에게 유해함

- 라벨 표기 요소
- 라벨 라벨 요소

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

· 그림 문자



GHS07 GHS08

· 신호어 경고

· 상표상에 명확히 위험성이 표시된 성분:

4,4-dimethyl-1-phenyl-3-pyrazolidone

하이드로퀴논

Metol

수산화 칼륨

유해 위험 문구

삼키면 유해함

피부에 자극을 일으킴

눈에 심한 자극을 일으킴

알레르기성 피부 반응을 일으킬 수 있음

유전적인 결함을 일으킬 것으로 의심됨

암을 일으킬 것으로 의심됨

신체 중에 손상을 일으킬 수 있음

장기간 또는 반복노출 되면 신체 중에 손상을 일으킬 수 있음

장기적인 영향에 의해 수생생물에게 유해함

· 예방 조치 문구

(분진·흙·가스·미스트·증기·스프레이)를(을) 흡입하지 마시오.

(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.

삼켰을 시: 몸에 이상이 있을 시 독성물질 센터/병원 연락 필요.

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

잠금장치가 있는 저장장소에 저장하십시오.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

기타 기타 유해성

· PBT(잔류성, 생물농축성, 물성물질) 및 vPvB(고 잔류성, 고 생물농축성) 물질이 포함되어 있지 않음

· PBT(잔류성, 생물농축성) 물질이 포함되어 있지 않음

· vPvB(고 잔류성, 고 생물농축성) 물질이 포함되어 있지 않음

### 3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

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

· 위험 요소

584-08-7	potassium carbonate	≤2.5%
급성 독성 - 경구 - 구분 4, H302; 심한 눈 손상성/눈 자극성 - 구분 2, H319		

(3 쪽에 계속)

# 물질안전보건자료 GHS에 따라

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(2 쪽부터 계속)

111-46-6	2,2'-oxybisethanol ⚠ 급성 독성 - 경구 - 구분 4, H302	≤2.5%
123-31-9	하이드로퀴논 ⚠ 생식세포 변이원성 - 구분 2, H341; ⚠ 발암성 - 구분 2, H351; ⚠ 심한 눈 손상성/눈 자극성 - 구분 1, H318; ⚠ 수생환경 유해성 - 급성 1, H400; ⚠ 급성 독성 - 경구 - 구분 4, H302; ⚠ 피부 과민성 - 구분 1, H317	≤2.5%
1310-58-3	수산화 칼륨 ⚠ 피부 부식성/피부 자극성 - 구분 1, H314; ⚠ 급성 독성 - 경구 - 구분 4, H302	≤2.5%
55-55-0	Metol ⚠ 특정표적장기 독성 - 반복 노출 - 구분 2, H373; ⚠ 수생환경 유해성 - 급성 1, H400; 수생환경 유해성 - 만성 1, H410; ⚠ 급성 독성 - 경구 - 구분 4, H302; ⚠ 피부 과민성 - 구분 1, H317	≤2.5%
2654-58-2	4,4-dimethyl-1-phenyl-3-pyrazolidone ⚠ 급성 독성 - 경구 - 구분 2, H300	≤2.5%

## 4 응급조치 요령

· **응급조치요령 내용 내용**

· **일반적 정보 정보**

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

· **흡입했을 때:**

신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.

환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

· **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.

· **눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 증상이 지속될 경우에는 의사와 상담한다

· **먹었을 때:** 즉시 의사의 도움을 구한다.

기타 기타 **각각**의 주의사항:

가장 가장 **중요한** **정보**는 **생물농도** **영향** **정보**가 존재하지 않습니다.

· **즉각적인 의료처리 및 특별처리가 필요함을 시사하는 징후** **정보**가 존재하지 않습니다.

## 5 폭발·화재시 대처방법

· **소화제**

· **적절한 소화제:** 주변 환경에 맞는 화재 진화 방법을 사용한다.

· **본 화학물질이나 혼합물에서 발생 시 특별한 주의 사항** 추가적인 정보가 존재하지 않습니다.

· **소방관에게 대한 신고 사항**

화재 **화재** **예방** **조치** **장비** **및** **예방조치:** 특별한 조치가 필요없음.

## 6 누출 사고 시 대처방법

· **개인적 예방조치, 보호장비 및 응급조치 절차** 필요 없음.

· **환경 관련 정보 정보:**

하천이나 하수로 유입되었을 경우 해당 관청에 보고한다.

많은 물로 희석 시킨다.

하수도망/해수면 위 물질/지하수로도 달하지 않게 한다.

· **밀폐 및 폐기물 처리 정보 정보:**

액체가 혼합된 물질 (모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.

항목 13에 따라 오염된 물질을 쓰레기로 처분한다.

충분한 환기가 되도록 한다.

(4 쪽에 계속)

# 물질안전보건자료

## GHS에 따라

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(3 쪽부터 계속)

**위험성**

안전 관리에 대한 정보는 제7 장 을 참고하시오.  
 개인 보호 장비에 대한 정보는 제8 장 을 참고하시오.  
 쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

### 7 취급 및 저장방법

취급 취급 취급

안전 안전 위해 예방 조치

작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.  
 연무질이 형성되는 것을 피한다.

화재 화재 위험성 예방 조치에 관한 정보는 별첨된 조치가 필요없음.

· 혼합 위험성 및 안정성 조건

보관 보관 보관

- 안전 정보에 관한 추가 정보는 없습니다.
- 하위 위험성 정보에 대한 정보는 별첨된 조치가 필요없음
- 보관 조건에 관한 추가 정보는 별첨된 조치가 필요없음
- 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

### 8 노출방지 및 개인보호구

· 첨단 시설 디자인에 대한 추가 정보: 더 이상 의 자료는 없음. 항목 7 을 참고하시오.

통제 통제 통제 변수

· 화학 물질의 노출 기준, 생물학적 노출 기준 등:

<b>111-46-6 2,2'-oxybisethanol</b>	
WEEL (US)	장기간의 값: 10 mg/m <sup>3</sup>
<b>123-31-9 하이드로퀴논</b>	
TLV (KR)	장기간의 값: 2 mg/m <sup>3</sup>
PEL (US)	장기간의 값: 2 mg/m <sup>3</sup>
REL (US)	최고 노출 기준: 2* mg/m <sup>3</sup> *15-min
TLV (US)	장기간의 값: 1 mg/m <sup>3</sup> DSEN
<b>1310-58-3 수산화 칼륨 칼륨</b>	
TLV (KR)	최고 노출 기준: 2 mg/m <sup>3</sup>
REL (US)	최고 노출 기준: 2 mg/m <sup>3</sup>
TLV (US)	최고 노출 기준: 2 mg/m <sup>3</sup>

· 추가 정보 정보 조할 당시에 유효한 목록을 기초로 사용했다.

노출 통제 통제 통제

개인 개인 보호구

· 일반적 보호 조치 및 위생 조치:

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식 전이나 작업이 끝날 때마다 손을 씻는다.
- 눈과 피부와의 접촉은 피한다.

(5 쪽에 계속)



# 물질안전보건자료 GHS에 따라라따

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(4 쪽부터 계속)

**· 호흡기 보호보호**

단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

**· 눈 보호보호**



보호용 장갑

장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다. 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다. 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

**· 장갑 의재료**

적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제로 이루어지는 것이기 때문에, 장갑재질의 안정성은 사전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크 되어져야 한다.

· **장갑 재료의 투과 시간** 정확한 관통 시간은 보호 장갑 제조자에 의하여 인지되고, 준수 되어야 한다.

**· 눈 보호보호**



확조이는 보안경

## 9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

**· 일반정보**

외형외형외형

· 물리적 상태상 태

액체

· 색:

연갈색

· 냄새

무취의

· 후각역치

알맞지 않다.

· pH:

알맞지 않다.

**· 상태변화**

· 녹는 점/어는 점:

맞지 않는다

초기초기 녹는 점과 끓는 점 범위 >100 °C

· 인화점:

해당 사항 없음.

· 인화성 고체/기체

해당 사항 없음.

· 분해 온도

알맞지 않다.

· 자기점화:

이 제품은 자연발화성이 없다.

· 폭발위험:

이 제품은 폭발위험성이 없다

· 인화성 액체/기체 상한선

· 아래로:

알맞지 않다.

· 위로

알맞지 않다.

· 증기압 의 경우 20 °C:

1.4 hPa

· 밀도 밀도 의 경우 20 °C:

1.35 g/cm<sup>3</sup>

· 비중 비중 비중

알맞지 않다.

(6 쪽에 계속)

# 물질안전보건자료 GHS에 따라라따

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(5 쪽부터계속)

· <b>중기밀도:</b> 중발 중발 중발 속도	알맞지않다. 알맞지않다.
· <b>용해도:</b> 물:	완전히혼합할수있는
· <b>n 옥탄올/물 분배계수:</b>	알맞지않다.
· <b>점도점도점도</b> · <b>역학성:</b> · <b>등점성:</b>	알맞지않다. 알맞지않다.
· <b>용매내용물</b> · <b>유기용매:</b> · <b>물:</b> · <b>VOC (EU)</b>	1.0 % 91.9 % 1.01 %
· <b>고체양함량함량</b> 기타 <b>장부장부</b> 정보	1.0 % 추가적인 정보가 존재하지 않습니다.

## 10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- **화학적 안정성**
- **화학적 안정성** 유해 반응의 가능성 / **피해야할 조건** 조건에 따라 사용 할 경우 해체는 없다
- **유해반응** 가능성 위험한 반응으로는 알려지지 않았다.
- **피해야할 조건** 조건에 추가적인 정보가 존재하지 않습니다.
- **혼합 혼합 혼합 혼합** 혼합물 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성 있는 분해물들은 알려지지 않았다.

## 11 독성에 관한 정보

· **독성학적 영향에 대한 정보**  
급성 독성 독성 독성

· <b>LD/LC50-수 제에 대한 분류</b>
<b>123-31-9 하이드로퀴논</b>
구강의 LD50 320 mg/kg (rat)
<b>1310-58-3 수산화 칼륨칼륨</b>
구강의 LD50 273 mg/kg (rat)

- **일차적 자극 효과**
- **피부 피부 부식성 또는 자극성:** 피부와 점막을 자극한다.
- **심한 심한 심한 심한 자극성:** 자극
- **감각 화:** 피부 접촉을 통하여 감각 화 가능성이 있다.
- **추 가 적 인 독 성 에 관 한 정 보**  
이제 품은 유럽 공동체의 공통 분류 원칙의 합법적인 절차에 근거하여 최근에 발효된 원고에서 아래 위험들 의사 전 준비에 대하여 제시하고 있다.  
건강에 해로운  
자극적인

(7 쪽에 계속)

# 물질안전보건자료

## GHS에 따라라따

기압점: 2018.09.06

개정: 2018.09.06

**제품명:** Kodak Polymax T Developer

(6 쪽부터계속)

다음다음 **중요**의 잠재적인 효과에 대한정보  
 · **CN**과 **효과**유발, **유발**이성 **그리고** **생생**성  
 생식세포 변이원성 - 구분 2, 발암성 - 구분 2

### 12 환경에 미치는 영향

독성독성독성

- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.

· **생태독성:**

의견의견의견

- 어류에독이됨
- 어류에 해 로움

· **추가적인 생태정보**

일반 **일반**특징

- 수질오염등급 1 (자체등급분류): 약하게수질오염이된
- 희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- 하천에서는역시물고기나플랑크톤게는독성이있다.
- 물속의유기체에독이되는것
- 물속의유기체에해가되는것

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

기타기타 **기타** 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

- **폐기물 처리 방법**
- 권고 권고 **권고**쓰레기와함께처리되어서는 안된다. 하수도망으로유입되어서는 안된다.
- **비위생적 포장포장**
- 권고 권고 **권고**의지침에입각한쓰레기처리.
- **추천 세정제:** 경우에따라서세제가첨가된물

### 14 운송에 필요한 정보

유엔 유엔번호

- ADR, IMDG, IATA UN2209

· **적정적정적정명**

- ADR 2209 FORMALDEHYDE SOLUTION
- IMDG, IATA FORMALDEHYDE SOLUTION

(8 쪽에계속)

# 물질안전보건자료

## GHS에 따라

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(7 쪽부터 계속)

**교통 규정 요건 및 클래스**

- ADR, IMDG, IATA



**등급**

- 위험물 라벨라벨

8 부식작용하는 물질  
8

**용기등급**

- ADR, IMDG, IATA

III

**환경적 유해물질:**

해당사항 없음.

**이물질 특별 예방 조치**

경고: 부식작용하는 물질

**위험물 운송 코드**

- EPC 번호번호

80

- Stowage Category

F-A,S-B

A

- MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른

**별크별크별 운송**

해당사항 없음.

**운송/추가정보**

- ADR

**한정량 (제한량 유량)**

- Excepted quantities (EQ)

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

**운송 구분**

3

**터널 제한 코드**

E

**IMDG**

- Limited quantities (LQ)

5L

- Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

- UN 번호 및 위험물 코드

UN 2209 FORMALDEHYDE SOLUTION, 8, III

### 15 법적 규제 현황

- 산업안전보건법에 의한 유해화학물질 규제

**제조제조금지물질:**

어떠한 내용물도 목록화되어 있지 않다

**허가대상물질:**

어떠한 내용물도 목록화되어 있지 않다

**관리대상 유해물질:**

123-31-9 하이드로퀴논

1310-58-3 수산화 칼륨

(9 쪽에 계속)

# 물질안전보건자료

## GHS에 따라라따

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(8 쪽부터 계속)

해당 해당 순물질 또는 혼합물에 대한 안전보건자료 작성 기준을 따릅니다

· Korean Existing Chemical Inventory		
7647-15-6	sodium bromide	KE-31368
10117-38-1	Sulfurous acid, dipotassium salt	KE-29203
584-08-7	potassium carbonate	KE-29083
111-46-6	2,2'-oxybisethanol	KE-27694
123-31-9	하이드로퀴논	KE-35112
1310-58-3	수산화 칼륨	KE-29139
55-55-0	Metol	KE-23433
2654-58-2	4,4-dimethyl-1-phenyl-3-pyrazolidone	KE-28325
7732-18-5	Deionized Water, Reagent Grade A.C.S.	KE-35400

· 화학물질관리법	
· 사고대비물질 어떠한 내용물도 목록화되어있지않다	
· 금지물질 어떠한 내용물도 목록화되어있지않다	
· 제한물질 어떠한 내용물도 목록화되어있지않다	
· 유독물질	
123-31-9	하이드로퀴논
1310-58-3	수산화 칼륨
· 허가물질	
123-31-9	하이드로퀴논
1310-58-3	수산화 칼륨

- **위험성평가요소**  
본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- **그림문자**



GHS07 GHS08

- **신호어 경고**
- **상표상에명확히위험성이표시된성분:**

4,4-dimethyl-1-phenyl-3-pyrazolidone

하이드로퀴논

Metol

수산화 칼륨

유해 화학물질 취급 문구

삼키면 유해함

피부에 자극을 일으킴

눈에 심한 자극을 일으킴

알레르기성 피부 반응을 일으킬 수 있음

유전적인 결함을 일으킬 것으로 의심됨

암을 일으킬 것으로 의심됨

신체 중에 손상을 일으킬 수 있음

장기간 또는 반복 노출 되면 신체 중에 손상을 일으킬 수 있음

(10 쪽에 계속)

# 물질안전보건자료

## GHS에 따라라따

기압점: 2018.09.06

개정: 2018.09.06

**제품명: Kodak Polymax T Developer**

(9 쪽부터계속)

장기적인 영향에 의해 수생생물에게 유해함

**· 예방조치 문구문구**

(분진·흙·가스·미스트·증기·스프레이)를(을) 흡입하지 마시오.

(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.

삼켰을 시: 몸에 이상이 있을 시 독성물질 센터/병원 연락 필요.

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

잠금장치가 있는 저장장소에 저장하십시오.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

**· 화학물질 안전성 평가평가 화학물질 안전성 평가가 수행되지 않음**

### 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

최초 **최초 작성일자:** 2018.09.06

개정 **개정 일자:** 1 / 2018.09.06

**· 약어와 두문자어:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 06.09.2018

Revisión: 06.09.2018

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

- **1.1 Identificador del producto**
- **Nombre comercial:** Kodak Polymax T Developer
- **Número del artículo:** 74232-01, 74232-12
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://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](mailto: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**



GHS08 peligro para la salud

Muta. 2	H341 Se sospecha que provoca defectos genéticos.
Carc. 2	H351 Se sospecha que provoca cáncer.
STOT SE 2	H371 Puede provocar daños en los órganos.
STOT RE 2	H373 Puede provocar daños en los órganos tras exposiciones prolongadas o repetidas.



GHS07

Acute Tox. 4	H302 Nocivo en caso de ingestión.
Skin Irrit. 2	H315 Provoca irritación cutánea.
Eye Irrit. 2	H319 Provoca irritación ocular grave.
Skin Sens. 1	H317 Puede provocar una reacción alérgica en la piel.
Aquatic Chronic 3	H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

( se continua en página 2 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 06.09.2018

Revisión: 06.09.2018

Nombre comercial: Kodak Polymax T Developer

( se continua en página 1 )

- **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**



GHS07 GHS08

- **Palabra de advertencia** Atención
- **Componentes peligrosos a indicar en el etiquetaje:**  
hidroquinona  
1-fenil-4,4-dimetil-3-pirazolidona  
sulfato de bis(4-hidroxi-N-metilanilinio)  
hidróxido de potasio
- **Indicaciones de peligro**  
H302 Nocivo en caso de ingestión.  
H315 Provoca irritación cutánea.  
H319 Provoca irritación ocular grave.  
H317 Puede provocar una reacción alérgica en la piel.  
H341 Se sospecha que provoca defectos genéticos.  
H351 Se sospecha que provoca cáncer.  
H371 Puede provocar daños en los órganos.  
H373 Puede provocar daños en los órganos tras exposiciones prolongadas o repetidas.  
H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.
- **Consejos de prudencia**  
P260 No respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.  
P280 Llevar guantes/prendas/gafas/máscara de protección.  
P301+P312 EN CASO DE INGESTIÓN: Llamar a un CENTRO DE TOXICOLOGÍA/médico si la persona se encuentra mal.  
P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.  
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: 584-08-7	carbonato de potasio	≤2,5%
EINECS: 209-529-3	⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	

( se continua en página 3 )



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 06.09.2018

Revisión: 06.09.2018

Nombre comercial: Kodak Polymax T Developer

( se continua en página 2 )

CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxidietanol ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 123-31-9 EINECS: 204-617-8	hidroquinona ⚠ Muta. 2, H341; ⚠ Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; ⚠ Skin Sens. 1, H317	≤2,5%
CAS: 1310-58-3 EINECS: 215-181-3	hidróxido de potasio ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	≤2,5%
CAS: 55-55-0 EINECS: 200-237-1	sulfato de bis(4-hidroxi-N-metilanilinio) ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; ⚠ Skin Sens. 1, H317	≤2,5%
CAS: 2654-58-2 EINECS: 220-181-1	1-fenil-4,4-dimetil-3-pirazolidona ⚠ Acute Tox. 3, H301	≤2,5%

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

### SECCIÓN 4: Primeros auxilios

#### · 4.1 Descripción de los primeros auxilios

##### · Instrucciones generales:

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:

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

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

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

##### · En caso de con los ojos:

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

##### · En caso de ingestión: Consultar inmediatamente un médico.

#### · 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** No es necesario.

#### · 6.2 Precauciones relativas al medio ambiente:

Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.

Diluir con mucha agua.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

#### · 6.3 Métodos y material de contención y de limpieza:

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Desechar el material contaminado como vertido según ítem 13.

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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

· **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**

Sin datos adicionales, ver punto 7.

· **8.1 Parámetros de control**

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

**111-46-6 2,2'-oxidietanol**

LEP Valor de corta duración: 176\* mg/m<sup>3</sup>, 40\* ppm

Valor de larga duración: 44\* mg/m<sup>3</sup>, 10\* ppm

\*Propuesta de modificación

**123-31-9 hidroquinona**

LEP Valor de larga duración: 2 mg/m<sup>3</sup>

Sen

**1310-58-3 hidróxido de potasio**

LEP Valor de corta duración: 2 mg/m<sup>3</sup>

· **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 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.

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### · 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:

Marrón claro

#### · Olor:

Inodoro

#### · 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: &gt;100 °C

#### · 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 a 20 °C:

1,4 hPa

#### · Densidad a 20 °C:

1,35 g/cm<sup>3</sup>

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· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No determinado.
· <b>Tasa de evaporación:</b>	No determinado.
· <b>Solubilidad en / miscibilidad con agua:</b>	Completamente mezclable.
· <b>Coefficiente de reparto: n-octanol/agua:</b>	No determinado.
· <b>Viscosidad:</b>	
<b>Dinámica:</b>	No determinado.
<b>Cinemática:</b>	No determinado.
· <b>Concentración del disolvente:</b>	
<b>Disolventes orgánicos:</b>	1,0 %
<b>Agua:</b>	91,9 %
<b>VOC (CE)</b>	1,01 %
· <b>Contenido de cuerpos sólidos:</b>	1,0 %
· <b>9.2 Otros datos</b>	No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

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

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**  
Nocivo en caso de ingestión.

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

#### 123-31-9 hidroquinona

Oral	LD50	320 mg/kg (rat)
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#### 1310-58-3 hidróxido de potasio

Oral	LD50	273 mg/kg (rat)
------	------	-----------------

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**  
Provoca irritación cutánea.
- **Lesiones o irritación ocular graves**  
Provoca irritación ocular grave.
- **Sensibilización respiratoria o cutánea**  
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
Se sospecha que provoca defectos genéticos.

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- **Carcinogenicidad**  
Se sospecha que provoca cáncer.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
Puede provocar daños en los órganos.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
Puede provocar daños en los órganos tras exposiciones prolongadas o repetidas.
- **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.
- **Efectos ecotóxicos:**
- **Observación:**  
Tóxico para peces.  
Nocivo para los peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 1 (autoclasiificación): escasamente peligroso para el agua  
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.  
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.  
tóxico para organismos acuáticos  
nocivo para organismos acuáticos
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

### SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN2209
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 2209 FORMALDEHÍDO EN SOLUCIÓN
- **IMDG, IATA** FORMALDEHYDE SOLUTION

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· 14.3 Clase(s) de peligro para el transporte

· ADR, IMDG, IATA



· Clase 8 Materias corrosivas  
 · Etiqueta 8

· 14.4 Grupo de embalaje

· ADR, IMDG, IATA III

· 14.5 Peligros para el medio ambiente: No aplicable.

· 14.6 Precauciones particulares para los usuarios Atención: Materias corrosivas

· Número Kemler: 80  
 · Número EMS: F-A,S-B  
 · Stowage Category A

· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC No aplicable.

· Transporte/datos adicionales:

· ADR  
 · Cantidades limitadas (LQ) 5L  
 · Cantidades exceptuadas (EQ) Código: E1  
 Cantidad neta máxima por envase interior: 30 ml  
 Cantidad neta máxima por embalaje exterior: 1000 ml  
 · Categoría de transporte 3  
 · Código de restricción del túnel E

· IMDG  
 · Limited quantities (LQ) 5L  
 · Excepted quantities (EQ) Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

· "Reglamentación Modelo" de la UNECE: UN 2209 FORMALDEHÍDO EN SOLUCIÓN, 8, III

## 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

· 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.

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· **Frases relevantes**

H301 Tóxico en caso de ingestión.

H302 Nocivo en caso de ingestión.

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

H317 Puede provocar una reacción alérgica en la piel.

H318 Provoca lesiones oculares graves.

H319 Provoca irritación ocular grave.

H341 Se sospecha que provoca defectos genéticos.

H351 Se sospecha que provoca cáncer.

H373 Puede provocar daños en los órganos tras exposiciones prolongadas o repetidas.

H400 Muy tóxico para los organismos acuáticos.

H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· **Abreviaturas y acrónimos:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Toxicidad aguda – Categoría 3

Acute Tox. 4: Toxicidad aguda – Categoría 4

Skin Corr. 1A: Corrosión o irritación cutáneas – Categoría 1A

Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2

Eye Dam. 1: Lesiones oculares graves o irritación ocular – Categoría 1

Eye Irrit. 2: Lesiones oculares graves o irritación ocular – Categoría 2

Skin Sens. 1: Sensibilización cutánea – Categoría 1

Muta. 2: Mutagenicidad en células germinales – Categoría 2

Carc. 2: Carcinogenicidad – Categoría 2

STOT SE 2: Toxicidad específica en determinados órganos ( exposición única) – Categoría 2

STOT RE 2: Toxicidad específica en determinados órganos (exposiciones repetidas) – Categoría 2

Aquatic Acute 1: Peligroso para el medio ambiente acuático - peligro acuático agudo – Categoría 1

Aquatic Chronic 1: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 1

Aquatic Chronic 3: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 3