

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

Printing date 09.01.2018

Version 12

Revision: 09.01.2018

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

· **1.1 Product identifier**

· **Trade name: Uniroll-D Teil 1**

· **Article number:** 10510, 10511

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

· **Application of the substance / the mixture**

Photochemicals
Developer for X-ray films
Reserved for industrial and professional use.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Calbe Chemie GmbH
Stadtfeld 31
D-39240 Calbe
Tel.: +49 (0)39291 425-0
Fax: +49 (0)39291 425-25
e-mail: info@calbe-chemie.de
www.calbe-chemie.de

· **Informing department:**

Tel.: +49 (0)39291 42515
E-Mail: kr@calbe-chemie.de

· **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

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.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

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Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

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

hydroquinone

· **Hazard statements**

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.

· **Precautionary statements**

P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
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 Mixtures**

- **Description:** Mixture of the substances listed below with harmless additions.

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• **Dangerous components:**

CAS: 123-31-9 EINECS: 204-617-8 Index number: 604-005-00-4 Reg.nr.: 01-2119524016-51-xxxx	hydroquinone ----- ☠ Acute Tox. 3, H311 ☠ Muta. 2, H341; Carc. 2, H351 ☠ Eye Dam. 1, H318 ☠ Aquatic Acute 1, H400 (M=10) ☠ Acute Tox. 4, H302; Skin Sens. 1, H317	5-10%
CAS: 111-46-6 EINECS: 203-872-2 Index number: 603-140-00-6 Reg.nr.: 01-2119457857-21-xxxx	2,2'-oxybisethanol ----- ☠ Acute Tox. 4, H302	5-10%
CAS: 584-08-7 EINECS: 209-529-3 Reg.nr.: 01-2119532646-36-xxxx	potassium carbonate ----- ☠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2-5%
CAS: 10043-35-3 EINECS: 233-139-2 Index number: 005-007-00-2 Reg.nr.: 01-2119486683-25-xxxx	boric acid ----- ☠ Repr. 1B, H360FD	2-5%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8 Reg.nr.: 01-2119487136-33-xxxx	potassium hydroxide ----- ☠ Met. Corr.1, H290; Skin Corr. 1A, H314 ☠ Acute Tox. 4, H302	0.5-2%

• **SVHC**

10043-35-3 | boric acid

• **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**

Personal protection for the First Aider.
Instantly remove any clothing soiled by the product.

• **After inhalation** Supply fresh air.

• **After skin contact**

Instantly wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

• **After eye contact**

Rinse opened eye for several minutes under running water (at least 15 minutes).
Remove contact lenses, if present and easy to do.
Use eye protection.
Call a doctor immediately.

• **After swallowing**

Rinse out mouth and then drink plenty of water.
Do not induce vomiting; instantly call for medical help.

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- **4.2 Most important symptoms and effects, both acute and delayed**
No known symptoms to date.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire
Sulphur oxides (SO_x)
Carbon monoxide
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
At formation of toxic gases:
Put on breathing apparatus.
- **Additional information** The product is not flammable

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, 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 of contaminated material as waste according to item 13.
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Do not handle until all safety precautions have been read and understood.
- **Information about protection against explosions and fires:**
No special measures required.
The product is not flammable

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
 Store only in unopened original containers.
 Keep container tightly closed in a cool, well-ventilated place.
- **Information about storage in one common storage facility:**
 Keep away from foodstuffs, beverages and food.
 Do not store together with acids.
 Store away from oxidising agents.
- **Further information about storage conditions:**
 Protect from heat and direct sunlight.
 Store in a cool place.
- **Recommended storage temperature:** 5-25°C
- **Storage class**
 LGK 12
 (German Technical Rule for Hazardous Substance – TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

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

123-31-9 hydroquinone	
WEL	Long-term value: 0.5 mg/m ³
111-46-6 2,2'-oxybisethanol	
WEL	Long-term value: 101 mg/m ³ , 23 ppm
1310-58-3 potassium hydroxide	
WEL	Short-term value: 2 mg/m ³

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
 The usual precautionary measures should be adhered to general rules for handling chemicals.
 Keep away from foodstuffs, beverages and food.
 Take off immediately all contaminated clothing.
 Wash contaminated clothing before reuse.
 Wash hands during breaks and at the end of the work.
 Do not eat, drink or smoke while working.
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**
 Protective gloves.
 The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.

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This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

Only use chemical-protective gloves with CE-labelling of category III.

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

• **Material of gloves**

	Breakthrough time	
	Thickness (mm)	(min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.

• **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

• **Eye protection:** Tightly sealed safety glasses.

• **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

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

• **General Information**

• **Appearance:**

Form:	Fluid
Colour:	Light yellow Clear

• **Odour:** Not characteristic

• **pH-value at 25 °C:** 10.9

• **Change in condition**

Melting point/freezing point:	< 5 °C
Initial boiling point and boiling range:	> 100 °C

• **Flash point:** Not applicable

• **Self-inflammability:** Product is not selfigniting.

• **Explosive properties:** Product is not explosive.

• **Vapour pressure at 20 °C:** 23 hPa

• **Density at 20 °C** 1.291 g/cm³

• **Solubility in / Miscibility with**

Water: miscible

• **Viscosity:**

dynamic:	Not determined
kinematic:	Not determined

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- | | |
|--------------------------------|--|
| · Solvent content: | |
| Organic solvents: | 5.2 % |
| Water: | ~ 60 % |
| · 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**
Reacts with strong acids
Reacts with acids releasing sulphur dioxide
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

123-31-9 hydroquinone

Oral	LD50	320 mg/kg
------	------	-----------

111-46-6 2,2'-oxybisethanol

Oral	LD50	12565 mg/kg (rat)
Dermal	LD50	11890 mg/kg (rabbit)

584-08-7 potassium carbonate

Oral	LD50	> 2000 mg/kg (rat)
------	------	--------------------

10043-35-3 boric acid

Oral	LD50	2660 mg/kg (rat)
------	------	------------------

1310-58-3 potassium hydroxide

Oral	LD50	365 mg/kg (rat)
------	------	-----------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.

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- **Additional toxicological information:**
This statement was deduced from the properties of the single components.
Dangerous for the environment.
- **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** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

123-31-9 hydroquinone

EC50/48 h	0.29 mg/l (Daphnia magna)
IC50/72 h	0.335 mg/l (Selenastrum capricornutum)
LC50/96 h	0.044 mg/l (Pimephales promelas)

111-46-6 2,2'-oxybisethanol

EC50/48 h	> 10000 mg/l (Daphnia magna)
LC50/96 h	75200 mg/l (Pimephales promelas)

584-08-7 potassium carbonate

EC50/48 h	380-820 mg/l (Daphnia magna)
LC50/96 h	310-750 mg/l (Pimephales promelas)

10043-35-3 boric acid

EC50/48 h	133 mg/l (Daphnia magna)
LC50/96 h	50 - 100 mg/l (Onchrohynchus mykiss)

1310-58-3 potassium hydroxide

LC50/96 h	80 mg/l (Gambusia affinis)
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- **12.2 Persistence and degradability** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxic effects:** No further relevant information available.
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**
At present there are no ecotoxicological assessments.
Water hazard class 3 (German Regulation) (Self-assessment): highly water-endangering.

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- Do not allow product to reach ground water, water bodies or sewage system.
- **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 of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated under adherence to official regulations.

- **European waste catalogue**

09 01 01*	water-based developer and activator solutions
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- **Uncleaned packagings:**
- **Recommendation:**
Non contaminated packagings can be used for recycling.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
EAK-No. 15 01 10
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- | | |
|---|---|
| • 14.1 UN-Number
• ADR/RID, IMDG, IATA | UN 3082 |
| • 14.2 UN proper shipping name
• ADR/RID, IMDG, IATA | ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S. (hydroquinone) |
| • 14.3 Transport hazard class(es)
• ADR/RID, IMDG, IATA | |
|   | |
| • Class
• Label | 9 Miscellaneous dangerous substances and
articles.
9 |
| • 14.4 Packing group
• ADR/RID, IMDG, IATA | III |

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<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR/RID): · Special marking (IATA): 	<p>Yes Symbol (fish and tree)</p> <p>Symbol (fish and tree) Symbol (fish and tree)</p>
<ul style="list-style-type: none"> · 14.6 Special precautions for user · EMS Number: 	<p>Warning: Miscellaneous dangerous substances and articles. F-A,S-F</p>
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: 	<p>These substances when transported in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general. See the following notes.</p>
<ul style="list-style-type: none"> · ADR/RID 	<p>Goods are not subject to the provisions in accordance with the special provision 375 ADR.</p>
<ul style="list-style-type: none"> · IMDG 	<p>Goods are not subject to the provisions in accordance with 2.10.2.7 IMDG-Code.</p>
<ul style="list-style-type: none"> · IATA 	<p>Goods are not subject to the provisions in accordance with the special provision A197 IATA-DGR.</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (HYDROQUINONE), 9, III</p>

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.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations**
- **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed.

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Class	Share in %
I	6.2
NK	5.2

- **Water hazard class:** Water danger class 3 (Self-assessment): highly water-endangering.
- **Other regulations, limitations and prohibitive regulations**

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

10043-35-3	boric acid
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- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Relevant phrases**

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H360FD May damage fertility. May damage the unborn child.
H400 Very toxic to aquatic life.

- **Recommended restriction of use** No public product, only for commercial use

• **Department issuing data specification sheet:**

Laboratory
Tel.: +49 (0)39291 425-15

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1

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Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
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
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

• **Sources**

applicable EEC directives:

- 1907/2006
- 1272/2008

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance

(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

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

• **1.1 Product identifier**

• **Trade name:** Uniroll-D Teil 2

• **Article number:** 10510, 10511

• **1.2 Relevant identified uses of the substance or mixture and uses advised against**

To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

• **Application of the substance / the mixture**

Photochemicals
Developer for X-ray films
Reserved for industrial and professional use.

• **1.3 Details of the supplier of the safety data sheet**

• **Manufacturer/Supplier:**

Calbe Chemie GmbH
Stadtfeld 31
D-39240 Calbe
Tel.: +49 (0)39291 425-0
Fax: +49 (0)39291 425-25
e-mail: info@calbe-chemie.de
www.calbe-chemie.de

• **Informing department:**

Tel.: +49 (0)39291 42515
E-Mail: kr@calbe-chemie.de

• **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

SECTION 2: Hazards identification

• **2.1 Classification of the substance or mixture**

• **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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








GHS05 GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
glutaral
- **Hazard statements**
H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P280 Wear protective gloves / eye protection.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
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 Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 111-30-8 EINECS: 203-856-5 Index number: 605-022-00-X Reg.nr.: 01-2119455549-26-xxxx	glutaral  Acute Tox. 3, H301; Acute Tox. 2, H330  Resp. Sens. 1, H334  Skin Corr. 1B, H314  Aquatic Acute 1, H400; Aquatic Chronic 2, H411  Skin Sens. 1A, H317; STOT SE 3, H335	5-10%
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CAS: 110-15-6	succinic acid	0.5-2%
EINECS: 203-740-4	⚠ Eye Irrit. 2, H319	
Reg.nr.: 01-2119896114-34-xxxx		

• **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**
 Personal protection for the First Aider.
 Instantly remove any clothing soiled by the product.
- **After inhalation**
 Take affected persons into the open air and position comfortably
 Seek medical treatment in case of complaints.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
 Rinse opened eye for several minutes under running water (at least 15 minutes).
 Remove contact lenses, if present and easy to do.
 Use eye protection.
 Call a doctor immediately.
- **After swallowing**
 Rinse out mouth and then drink plenty of water.
 Do not induce vomiting; instantly call for medical help.
- **4.2 Most important symptoms and effects, both acute and delayed**
 No known symptoms to date.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
 CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
 Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
 Can be released in case of fire
 Sulphur oxides (SOx)
 Carbon monoxide
- **5.3 Advice for firefighters**
- **Protective equipment:**
 Do not inhale explosion gases or combustion gases.
 At formation of toxic gases:

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Put on breathing apparatus.

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SECTION 6: Accidental release measures

• **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.
Ensure adequate ventilation.

• **6.2 Environmental precautions:** Do not allow to enter drainage system, 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 of contaminated material as waste according to item 13.
Ensure adequate ventilation.

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

• **6.4 Reference to other sections**

See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

• **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
Avoid contact with the eyes and skin.

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

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

• **Storage**

• **Requirements to be met by storerooms and containers:**

Store container in a well ventilated position.

• **Information about storage in one common storage facility:**

Keep away from foodstuffs, beverages and food.

• **Further information about storage conditions:**

Keep container tightly sealed.
Protect from heat and direct sunlight.

Store in a cool place.

• **Recommended storage temperature:** 5-25°C

• **Storage class** LGK 8 B

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

SECTION 8: Exposure controls/personal protection

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

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- **8.1 Control parameters**

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

111-30-8 glutaral	
WEL	Short-term value: 0.2 mg/m ³ , 0.05 ppm Long-term value: 0.2 mg/m ³ , 0.05 ppm Sen

- **Additional information:** The lists that were valid during the compilation were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

The usual precautionary measures should be adhered to general rules for handling chemicals.

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing.

Wash contaminated clothing before reuse.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke while working.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

Use breathing protection in case of insufficient ventilation.

Filter A/P2.

- **Protection of hands:**

Protective gloves.

The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.

This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

Only use chemical-protective gloves with CE-labelling of category III.

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

- **Material of gloves**

Thickness	Breakthrough time	
	(mm)	(min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.

- **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

- **Eye protection:** Tightly sealed safety glasses.

- **Body protection:** Protective work clothing.

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SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Pungent

· pH-value at 25 °C: 6.8

· **Change in condition**

Melting point/freezing point:	< 5 °C
Initial boiling point and boiling range:	> 100 °C

· **Flash point:** Not applicable

· **Self-inflammability:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive.

· **Critical values for explosion:**

Oxidising properties: None

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C** 1,160 g/cm³

· **Solubility in / Miscibility with**

Water: miscible

· **Viscosity:**

dynamic:	Not determined
kinematic:	Not determined

· **Solvent content:**

Organic solvents:	0.0 %
Water:	~ 70 %

· **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

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SECTION 11: Toxicological information

- 11.1 Information on toxicological effects

- Acute toxicity

Harmful if swallowed or if inhaled.

- LD/LC50 values that are relevant for classification:

111-30-8 glutaral		
Oral	LD50	134 mg/kg
110-15-6 succinic acid		
Oral	LD50	2260 mg/kg (rat)

- Primary irritant effect:

- Skin corrosion/irritation

Causes severe skin burns and eye damage.

- Serious eye damage/irritation

Causes serious eye damage.

- Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

- Subacute to chronic toxicity: No known symptoms to date.

- Additional toxicological information:

This statement was deduced from the properties of the single components.

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

- Germ cell mutagenicity Based on available data, the classification criteria are not met.

- Carcinogenicity Based on available data, the classification criteria are not met.

- Reproductive toxicity Based on available data, the classification criteria are not met.

- STOT-single exposure Based on available data, the classification criteria are not met.

- STOT-repeated exposure Based on available data, the classification criteria are not met.

- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

111-30-8 glutaral	
EC50/48 h	30 mg/l (Daphnia magna)
LC50/96 h	10.5 mg/l (Leuciscus idus)
110-15-6 succinic acid	
EC50/48 h	374 mg/l (Daphnia magna)

- 12.2 Persistence and degradability Not determined

- 12.3 Bioaccumulative potential Not determined

- Behaviour in environmental systems: Not determined

- 12.4 Mobility in soil No further relevant information available.

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- **Ecotoxicological effects:** No further relevant information available.
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**
At present there are no ecotoxicological assessments.
This statement was deduced from the properties of the single components.
Water hazard class 3 (German Regulation) (Self-assessment): highly water-endangering.
Do not allow product to reach ground water, water bodies or sewage system.
The product contains materials that are harmful to the environment.
Harmful to aquatic organisms
The product does not contain organically bounded halogens (AOX-free).
- **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 of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated under adherence to official regulations.

· **European waste catalogue**

09 01 01*	water-based developer and activator solutions
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- **Uncleaned packagings:**
- **Recommendation:**
Non contaminated packagings can be used for recycling.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
EAK-No. 15 01 10
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- | | |
|---------------------------------------|-------------------------------------|
| · 14.1 UN-Number | |
| · ADR/RID, IMDG, IATA | UN 1760 |
| · 14.2 UN proper shipping name | |
| · ADR/RID, IMDG, IATA | CORROSIVE LIQUID, N.O.S. (glutaral) |

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- **14.3 Transport hazard class(es)**

- **ADR/RID, IMDG, IATA**



- **Class** 8 Corrosive substances.
- **Label** 8

- **14.4 Packing group**
- **ADR/RID, IMDG, IATA**

III

- **14.5 Environmental hazards:**

- **Marine pollutant:** No

- **14.6 Special precautions for user**

Warning: Corrosive substances.

- **EMS Number:**

F-A,S-B

- **Segregation groups**

none

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

- **Transport/Additional information:**

- **ADR/RID**

- **Limited quantities (LQ)**

5 l

- **Transport category**

3

- **Tunnel restriction code**

E

- **Remarks:**

"Limited quantity" according to chapter 3.4 ADR

- **IMDG**

- **Limited quantities (LQ)**

5 l

- **Remarks:**

"Limited quantity" according to chapter 3.4 IMDG

- **IATA**

- **Remarks:**

Packing Instruction
PAX 852, CAO 856

- **UN "Model Regulation":**

UN 1760 CORROSIVE LIQUID, N.O.S.
(GLUTARAL), 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

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· **National regulations**

Class	Share in %
I	9.6

- **Water hazard class:** Water danger class 3 (Self-assessment): highly water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they 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.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

- **Recommended restriction of use** No public product, only for commercial use

· **Department issuing data specification sheet:**

Laboratory
Tel.: +49 (0)39291 425-15

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organisation
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
 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)
 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
 Acute Tox. 2: Acute toxicity – Category 2
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 Skin Sens. 1A: Skin sensitisation – Category 1A
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

• **Sources**

applicable EEC directives:

- 1907/2006
- 1272/2008

Internal physical tests, MSDS of the ingredients,
Information system on hazardous substances of the German Social Accident Insurance
(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

- * **Data compared to the previous version altered.**

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

· **1.1 Product identifier**

· **Trade name:** Uniroll-D Teil 3

· **Article number:** 10510, 10511

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

· **Application of the substance / the mixture**

Photochemicals
Developer for X-ray films
Reserved for industrial and professional use.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Calbe Chemie GmbH
Stadtfeld 31
D-39240 Calbe
Tel.: +49 (0)39291 425-0
Fax: +49 (0)39291 425-25
e-mail: info@calbe-chemie.de
www.calbe-chemie.de

· **Informing department:**

Tel.: +49 (0)39291 42515
E-Mail: kr@calbe-chemie.de

· **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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

· **Signal word** Warning

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- **Hazard statements**
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
 - P273 Avoid release to the environment.
 - P280 Wear protective gloves / eye protection.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 If eye irritation persists: Get medical advice/attention.
 - 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 Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

CAS: 64-19-7 EINECS: 200-580-7 Index number: 607-002-00-6 Reg.nr.: 01-2119475328-30-xxxx	acetic acid ⚠ Flam. Liq. 3, H226 ⚠ Skin Corr. 1A, H314 ⚠ Acute Tox. 4, H312	15-20%
CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3 Reg.nr.: 01-2119457435-35-xxxx	1-methoxypropan-2-ol ⚠ Flam. Liq. 3, H226 ⚠ STOT SE 3, H336	10-15%
CAS: 92-43-3 EINECS: 202-155-1 Index number: 606-022-00-2 Reg.nr.: 01-2120118765-53-xxxx	1-phenyl-3-pyrazolidone ⚠ Aquatic Chronic 2, H411 ⚠ Acute Tox. 4, H302	5.0-10%

- **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**
 - Personal protection for the First Aider.
 - Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.

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- **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 minutes).
Remove contact lenses, if present and easy to do.
Use eye protection.
Call a doctor immediately.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; instantly call for medical help.
- **4.2 Most important symptoms and effects, both acute and delayed**
No known symptoms to date.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire
Carbon monoxide
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
At formation of toxic gases:
Put on breathing apparatus.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, 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 of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with the eyes and skin.

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- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 Keep container tightly sealed.
 Protect from heat and direct sunlight.
 Store in a cool place.
- **Recommended storage temperature:** 5-25°C
- **Storage class**
 LGK 12
 (German Technical Rule for Hazardous Substance – TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

· **8.1 Control parameters**

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

107-98-2 1-methoxypropan-2-ol

WEL	Short-term value: 560 mg/m ³ , 150 ppm
	Long-term value: 375 mg/m ³ , 100 ppm
	Sk

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
 The usual precautionary measures should be adhered to general rules for handling chemicals.
 Keep away from foodstuffs, beverages and food.
 Do not eat, drink or smoke while working.
 Take off immediately all contaminated clothing.
 Wash hands during breaks and at the end of the work.
 Avoid contact with the eyes and skin.
- **Breathing equipment:**
 Use a breathing protection if high concentrations are present.
 Filter AX.
- **Protection of hands:**
 Protective gloves.
 The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.
 This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.
 Only use chemical-protective gloves with CE-labelling of category III.

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

· **Material of gloves**

Thickness (mm)	Breakthrough time (min)	
Chloroprene rubber	0,5	> 480
Nitril rubber	0,35	> 480
Butyl rubber	0,5	> 480
Fluorocarbon rubber	0,4	> 480
PVC	0,5	> 480

Avoid natural rubber gloves.

· **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level ≤ 3 (60 min)

· **Eye protection:** Tightly sealed safety glasses.

· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	Light yellow
Odour:	Acidic

· **pH-value at 25 °C:** 3.7

· **Change in condition**

Melting point/freezing point:	< 5 °C
Initial boiling point and boiling range:	> 100 °C

· **Flash point:** 62 °C

· **Ignition temperature:** 270 °C

· **Self-inflammability:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive.

· **Critical values for explosion:**

Lower:	1.9 Vol %
Upper:	17.0 Vol %

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C** 1.095 g/cm³

· **Solubility in / Miscibility with**

Water: miscible

· **Viscosity:**

dynamic: Not determined

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kinematic:	Not determined
· Solvent content:	
Organic solvents:	31.4 %
Water:	~ 10 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:

64-19-7 acetic acid		
Oral	LD50	3310 mg/kg (rat)
Dermal	LD50	1060 mg/kg (rabbit)
107-98-2 1-methoxypropan-2-ol		
Oral	LD50	4016 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)
Inhalative	LC50/4 h	6 mg/l (rat)
92-43-3 1-phenyl-3-pyrazolidone		
Oral	LD50	200 mg/kg (rat)
25322-68-3 Polyethylenglycol		
Oral	LD50	> 2000 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:** No known symptoms to date.

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- **Additional toxicological information:**
This statement was deduced from the properties of the single components.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

64-19-7 acetic acid

LC50/96 h | 75 mg/l (Lepomis macrochirus)

107-98-2 1-methoxypropan-2-ol

EC50/48 h | 23300 mg/l (Daphnia magna)

≥1000 mg/l (Onchrohynchus mykiss)

IC50/72 h | > 1000 mg/l (Selenastrum capricornutum)

LC50/96 h | 6812 mg/l (Leuciscus idus)

20800 mg/l (Pimephales promelas)

92-43-3 1-phenyl-3-pyrazolidone

LC50/96 h | 1-10 mg/l (Pimephales promelas)

- **12.2 Persistence and degradability** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:** No further relevant information available.

Additional ecological information:

General notes:

At present there are no ecotoxicological assessments.

Water hazard class 2 (German Regulation) (Self-assessment): Water-endangering.

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

Harmful to aquatic organisms

The product does not contain organically bounded halogens (AOX-free).

12.5 Results of PBT and vPvB assessment

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

GB

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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated under adherence to official regulations.

- **European waste catalogue**

09 01 01*	water-based developer and activator solutions
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- **Uncleaned packagings:**

- **Recommendation:**

Non contaminated packagings can be used for recycling.

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleaned are to be disposed of in the same manner as the product. EAK-No. 15 01 10

- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR/RID, IMDG, IATA**

UN 2790

- **14.2 UN proper shipping name**

- **ADR/RID, IMDG, IATA**

ACETIC ACID SOLUTION

- **14.3 Transport hazard class(es)**

- **ADR/RID, IMDG, IATA**



- **Class**

8 Corrosive substances.

- **Label**

8

- **14.4 Packing group**

- **ADR/RID, IMDG, IATA**

III

- **14.5 Environmental hazards:**

- **Marine pollutant:**

No

- **14.6 Special precautions for user**

Warning: Corrosive substances.

- **Kemler Number:**

80

- **EMS Number:**

F-A,S-B

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

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· **Transport/Additional information:**

· **ADR/RID**

· **Limited quantities (LQ)** 5 l

· **Transport category** 3

· **Tunnel restriction code** E

· **Remarks:** "Limited quantity" according to chapter 3.4 ADR

· **IMDG**

· **Limited quantities (LQ)** 5 l

· **Remarks:** "Limited quantity" according to chapter 3.4 IMDG

· **IATA**

· **Remarks:** PAX 852 CAO 856

· **UN "Model Regulation":** UN2790, ACETIC ACID SOLUTION, 8, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **National regulations**

Class	Share in %
II	18.8
NK	12.6

- **Water hazard class:** Water hazard class 2 (Self-assessment): water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

- **Recommended restriction of use** No public product, only for commercial use

· **Department issuing data specification sheet:**

Laboratory
Tel.: +49 (0)39291 425-15

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· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – 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 Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Sources**

applicable EEC directives:

- 1907/2006
- 1272/2008

Internal physical tests, MSDS of the ingredients,
Information system on hazardous substances of the German Social Accident Insurance
(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

· * **Data compared to the previous version altered.**