

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

Printing date 15.07.2015

version no: 2

Revision: 15.07.2015

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

**1.1 Product identifier**

**Trade name:** ROLLEI LITH DEVELOPER  
PART A

**Article number:** RSL70

**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** Developer for photographic use

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

**Manufacturer/Supplier:**  
Fotospeed (Jay House Ltd.)  
Unit 6B, Park Lane Industrial Estate, Corsham, Wiltshire  
SN13 9LG  
01249 714555  
www.fotospeed.com; sales@fotospeed.com

**Further information obtainable from:** sales@fotospeed.com

**1.4 Emergency telephone number:** 01249 714555

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

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



GHS08

Muta. 2            H341 Suspected of causing genetic defects.  
Carc. 2            H351 Suspected of causing cancer.



GHS05

Eye Dam. 1        H318 Causes serious eye damage.



GHS09

Aquatic Acute 1   H400 Very toxic to aquatic life.



GHS07

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

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R40-68:    Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.



Xi; Irritant

R41:        Risk of serious damage to eyes.

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Xi; Sensitising

R43: May cause sensitisation by skin contact.



N; Dangerous for the environment

R50: Very toxic to aquatic organisms.

**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**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**

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**

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

P302+P352 IF ON SKIN: Wash with plenty of water.

P501 Dispose of contents/container in accordance with local 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 and with nonhazardous additions.

**Dangerous components:**

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CAS: 123-31-9 EINECS: 204-617-8 Index number: 604-005-00-4 Reg.nr.: 01-2119524016-51	hydroquinone ☒ Xn R22-40-68; ☒ Xi R41; ☒ Xi R43; ☒ N R50 Carc. Cat. 3, Muta. Cat. 3 ☒ Muta. 2, H341; Carc. 2, H351; ☒ Eye Dam. 1, H318; ☒ Aquatic Acute 1, H400 (M=10); ☒ Acute Tox. 4, H302; Skin Sens. 1, H317	10-<25%
CAS: 140-01-2 EINECS: 205-391-3 Reg.nr.: 01-2119474445-33	Diethylenetriaminepentaacetic acid, pentasodium salt (DTPA-Na5) ☒ Xn R20-63 Repr. Cat. 2 ☒ Repr. 2, H361d; ☒ Acute Tox. 4, H332	<1%

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

#### SECTION 4: First aid measures

##### 4.1 Description of first aid measures

- . **General information:** Immediately remove any clothing/shoes soiled by the product.
- . **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- . **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- . **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- . **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

#### SECTION 5: Firefighting measures

##### 5.1 Extinguishing media

###### Suitable extinguishing agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

##### 5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide (CO)

Sulphur dioxide (SO<sub>2</sub>)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

##### 5.3 Advice for firefighters

. **Protective equipment:** Do not inhale explosion gases or combustion gases.

#### SECTION 6: Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Wear protective clothing.

##### 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.

Pick up mechanically.

##### 6.4 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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See Section 13 for disposal information.

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**SECTION 7: Handling and storage**

- . **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- . **Information about fire - and explosion protection:** Protect from heat.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- . **Information about storage in one common storage facility:**
- Store away from foodstuffs.
- Store away from oxidising agents.
- . **Further information about storage conditions:**
- Store in cool, dry conditions in well sealed receptacles.
- Protect from heat and direct sunlight.
- Protect from exposure to the light.
- Recommended storage temperature: 5-30 °C
- . **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:**

**123-31-9 hydroquinone (10-25%)**

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

**50-00-0 formaldehyde (<1%)**

WEL Short-term value: 2.5 mg/m<sup>3</sup>, 2 ppm  
Long-term value: 2.5 mg/m<sup>3</sup>, 2 ppm

- . **DNELs**

**123-31-9 hydroquinone**

Dermal	Long-term - systemic - effects, worker	128 mg/kg bw/day (wkd)
	Long-term - systemic effects, general population	64 mg/kd bw/day (wkd)
Inhalative	Long-term - local - effects, worker	1 mg/m <sup>3</sup> (wkd)
	Long-term - local effects, general population	0.5 mg/m <sup>3</sup> (wkd)
	Long-term - systemic effects, general population	1.74 mg/m <sup>3</sup> (wkd)
	Long-term exposure - local effects, worker	7 mg/m <sup>3</sup> (wkd)

- . **PNECs**

**123-31-9 hydroquinone**

Aquatic compartment - freshwater	0.000114 mg/l (Water)
Aquatic compartment - marine water	0.000114 mg/l (Water)
Aquatic compartment -sediment in freshwater	0.00098 mg/kg sed dw (Water)
Aquatic compartment -sediment in marine water	0.000097 mg/kg sed dw (Water)
Aquatic compartment -water, intermittent releases	0.00134 mg/l (Water)
Sewage treatment plant (Abwasserreinigungsanlagen)	0.71 mg/l (Sewage Treatment Plant)
Terrestrial compartment -soil	0.000129 mg/kg dw (Soil)

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

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**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

**Respiratory protection:** Ensure adequate ventilation

**Protection of hands:**



Protective gloves

Impervious gloves

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

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.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

**Penetration time of glove material**

Glove material      breakthrough-time      layer thickness

Butyl rubber:      >480 min      ≥0,4mm

Nitrile rubber:      >480 min      ≥0,38mm

Neoprene:      >240 min      ≥0,65mm

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

**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:** Recognisable

**pH-value at 20 °C:** 5.6

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** > 100 °C

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. <b>Flash point:</b>	Not applicable.
. <b>Ignition temperature:</b>	355 °C
. <b>Self-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>	0.9 Vol %
<b>Upper:</b>	9.2 Vol %
. <b>Vapour pressure at 20 °C:</b>	23 hPa
. <b>Density at 20 °C:</b>	1.26 g/cm <sup>3</sup>
. <b>Solubility in / Miscibility with water:</b>	Fully miscible.
. <b>Solvent content:</b>	
<b>Water:</b>	>35 %
. <b>9.2 Other information</b>	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:** Stable at environment temperature.
- . **10.3 Possibility of hazardous reactions** Reacts with acids, alkalis and oxidising agents.
- . **10.4 Conditions to avoid** No further relevant information available.
- . **10.5 Incompatible materials:** Under certain fire conditions, traces of other toxic gases cannot be excluded.
- . **10.6 Hazardous decomposition products:**  
Irritant gases/vapours  
Carbon monoxide and carbon dioxide

### SECTION 11: Toxicological information

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

. <b>LD/LC50 values relevant for classification:</b>		
<b>123-31-9 hydroquinone</b>		
Oral	LD50	302 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
<b>140-01-2 Diethylenetriaminepentaacetic acid, pentasodium salt (DTPA-Na5)</b>		
Oral	LD50	>2000 mg/kg (rat)

- . **Primary irritant effect:**
- . **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- . **Serious eye damage/irritation**  
Causes serious eye damage.
- . **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.

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- . **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 48h: 0.29 mg/l (daphnia magna (Water flea))

LC50 96h: 0.044 mg/l (fish: Pimephales promelas)

##### **140-01-2 Diethylenetriaminepentaacetic acid, pentasodium salt (DTPA-Na5)**

EC50 48h: >500 mg/l (daphnia magna (Water flea))

48h: >500 mg/l (Invertebrates)

LC50 96h: 1115 mg/l (fish)

96h: >1000 mg/l (Lepomis macrochirus (Sonnenbarsch))

- . **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.

#### . Ecotoxicological effects:

. **Remark:** Very toxic for fish

#### . Additional ecological information:

##### . General notes:

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

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

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

Also poisonous for fish and plankton in water bodies.

Very toxic for 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.

#### . European waste catalogue

09 01 01\* | water-based developer and activator solutions

#### . 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**

UN3082

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<p>. <b>14.2 UN proper shipping name</b> . <b>ADR</b></p>	<p>3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydroquinone (1,4-dihydroxybenzene))</p>
<p>. <b>IMDG</b></p>	<p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT</p>
<p>. <b>IATA</b></p>	<p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone)</p>
<p>. <b>14.3 Transport hazard class(es)</b></p>	
<p>. <b>ADR</b></p>	
	
<p>. <b>Class</b> . <b>Label</b></p>	<p>9 (M6) Miscellaneous dangerous substances and articles. 9</p>
<p>. <b>IMDG, IATA</b></p>	
	
<p>. <b>Class</b> . <b>Label</b></p>	<p>9 Miscellaneous dangerous substances and articles. 9</p>
<p>. <b>14.4 Packing group</b> . <b>ADR, IMDG, IATA</b></p>	
<p>III</p>	
<p>. <b>14.5 Environmental hazards:</b></p>	
<p>. <b>Marine pollutant:</b></p>	<p>Yes Symbol (fish and tree)</p>
<p>. <b>Special marking (ADR):</b></p>	<p>Symbol (fish and tree)</p>
<p>. <b>Special marking (IATA):</b></p>	<p>Symbol (fish and tree)</p>
<p>. <b>14.6 Special precautions for user</b></p>	
<p>Warning: Miscellaneous dangerous substances and articles.</p>	
<p>. <b>Danger code (Kemler):</b></p>	<p>90</p>
<p>. <b>EMS Number:</b></p>	<p>F-A,S-F</p>
<p>. <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></p>	
<p>Not applicable.</p>	
<p>. <b>Transport/Additional information:</b></p>	
<p>. <b>ADR</b></p>	
<p>. <b>Limited quantities (LQ)</b> . <b>Excepted quantities (EQ)</b></p>	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p>
<p>. <b>Transport category</b> . <b>Tunnel restriction code</b></p>	<p>3 E</p>
<p>. <b>IMDG</b></p>	
<p>. <b>Limited quantities (LQ)</b></p>	<p>5L</p>

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<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>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

### SECTION 15: Regulatory information

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

- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H361d Suspected of damaging the unborn child.
- H400 Very toxic to aquatic life.
- .....
- R20 Harmful by inhalation.
- R22 Harmful if swallowed.
- R40 Limited evidence of a carcinogenic effect.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R50 Very toxic to aquatic organisms.
- R63 Possible risk of harm to the unborn child.
- R68 Possible risk of irreversible effects.

**. Contact:** e-mail: sida@tetenal.com

**. 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)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- 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, Hazard Category 4
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Muta. 2: Germ cell mutagenicity, Hazard Category 2
- Carc. 2: Carcinogenicity, Hazard Category 2

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Repr. 2: Reproductive toxicity, Hazard Category 2  
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1  
\* **Data compared to the previous version altered.**

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EN

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

- . **1.1 Product identifier**
- . **Trade name:** ROLLEI LITH DEVELOPER PART B
- . **Article number:** RSL70
- . **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** Developer for photographic use
- . **1.3 Details of the supplier of the safety data sheet**
- . **Manufacturer/Supplier:**  
Fotospeed (Jay House Ltd.)  
Unit 6B, Park Lane Industrial Estate, Corsham, Wiltshire  
SN13 9LG  
01249 714555  
www.fotospeed.com; sales@fotospeed.com
- . **Further information obtainable from:** sales@fotospeed.com
- . **1.4 Emergency telephone number:** 01249 714555

**SECTION 2: Hazards identification**

- . **2.1 Classification of the substance or mixture**
- . **Classification according to Regulation (EC) No 1272/2008**  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2 H319 Causes serious eye irritation.
- . **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Xi; Irritant  
R36/38: Irritating to eyes and skin.
- . **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- . **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- . **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
- . **Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.
- . **Precautionary statements**  
P280 Wear protective gloves/protective clothing/eye protection/face 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.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- . **2.3 Other hazards**
- . **Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.

**Trade name:** ROLLEI LITH DEVELOPER PART B

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. vPvB: Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterization: Mixtures

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

##### . Dangerous components:

CAS: 584-08-7 EINECS: 209-529-3 Reg.nr.: 01-2119532646-36-xxxx	potassium carbonate ☒ Xi R36/38 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10- <25%
CAS: 497-19-8 EINECS: 207-838-8 Index number: 011-005-00-2 Reg.nr.: 01-2119485498-19-xxxx	Sodium carbonate ☒ Xi R36 ⚠ Eye Irrit. 2, H319	3-5%
CAS: 1332-77-0 EINECS: 215-575-5	dipotassium tetraborate ☒ Xn R62-63 ⚠ Repr. 2, H361	1- <2%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8 Reg.nr.: 01-2119487136-33	potassium hydroxide ☒ C R35; ☒ Xn R22 ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	1- <2%
CAS: 140-01-2 EINECS: 205-391-3 Reg.nr.: 01-2119474445-33-xxxx	Diethylenetriaminepentaacetic acid, pentasodium salt (DTPA-Na5) ☒ Xn R20-63 ⚠ Repr. 2, H361; ⚠ Acute Tox. 4, H332	1- <2%

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

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

. **General information:** Immediately remove any clothing/shoes soiled by the product.

. **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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

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

No further relevant information available.

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

No further relevant information available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### . Suitable extinguishing agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### 5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide (CO)

Sulphur dioxide (SO<sub>2</sub>)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

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**5.3 Advice for firefighters**

**Protective equipment:** Do not inhale explosion gases or combustion gases.

**SECTION 6: Accidental release measures**

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Wear protective clothing.

**6.2 Environmental precautions:**

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).

Pick up mechanically.

**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.

**Information about fire - and explosion protection:** Protect from heat.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

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

Store away from foodstuffs.

Store away from oxidizing agents.

**Further information about storage conditions:**

Keep container tightly sealed.

Protect from heat and direct sunlight.

Store under lock and key and out of the reach of children.

Recommended storage temperature: 5-25 °C

Protect from exposure to the light.

**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:**

**1310-58-3 potassium hydroxide (<2%)**

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:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

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- Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
. **Respiratory protection:** Ensure adequate ventilation  
. **Protection of hands:**



Protective gloves

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

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

. **Penetration time of glove material**

Glove material	breakthrough-time	layer thickness
Butyl rubber:	>480 min	≥0,4mm
Nitrile rubber:	>480 min	≥0,38mm
Neoprene:	>240 min	≥0,65mm

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

. **Eye protection:**



Tightly sealed goggles

. **Body protection:** Protective work clothing

**SECTION 9: Physical and chemical properties**

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

. **General Information**

. **Appearance:**

. <b>Form:</b>	Fluid
. <b>Colour:</b>	Light yellow
. <b>Odour:</b>	Recognizable

. **pH-value at 20 °C:** >13

. **Change in condition**

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

. **Flash point:** Not applicable.

. **Self-igniting:** Product is not selfigniting.

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

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

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. <b>Density at 20 °C:</b>	1.33 g/cm <sup>3</sup>
. <b>Solubility in / Miscibility with water:</b>	Fully miscible.
. <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	>60 %
<b>VOC (EC)</b>	0.00 %
. <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- . **10.1 Reactivity**
- . **10.2 Chemical stability**
- . **Thermal decomposition / conditions to be avoided:** Stable at environment temperature.
- . **10.3 Possibility of hazardous reactions**  
Reacts with acids, alkalis and oxidizing agents.  
Reacts with acids releasing sulphur dioxide.
- . **10.4 Conditions to avoid** No further relevant information available.
- . **10.5 Incompatible materials:** Under certain fire conditions, traces of other toxic gases cannot be excluded.
- . **10.6 Hazardous decomposition products:**  
Irritant gases/vapours  
Carbon monoxide and carbon dioxide

### SECTION 11: Toxicological information

- . **11.1 Information on toxicological effects**
- . **Acute toxicity:**
- . **LD/LC50 values relevant for classification:**
- 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:** No sensitizing effects known.
- . **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant

### SECTION 12: Ecological information

- . **12.1 Toxicity**
- . **Aquatic toxicity:**
- 1310-58-3 potassium hydroxide**
- LC50 | 96h: 80 mg/L (fish (acute toxicity study))
- . **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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- . **Additional ecological information:**
- . **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course 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 together with household garbage. Do not allow product to reach sewage system.
- . **European waste catalogue**

09 01 01*	water-based developer and activator solutions
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- . **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 UN3267
- . **14.2 UN proper shipping name**  
IMDG, IATA CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.  
(POTASSIUM HYDROXIDE)
- . **14.3 Transport hazard class(es)**
  - . **ADR**  
  
. **Class** 8 (C7) Corrosive substances.  
. **Label** 8
  - . **IMDG, IATA**  
  
. **Class** 8 Corrosive substances.  
. **Label** 8
- . **14.4 Packing group**  
ADR, IMDG, IATA III
- . **14.5 Environmental hazards:**
  - . **Marine pollutant:** No
- . **14.6 Special precautions for user** Warning: Corrosive substances.

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. <b>Danger code (Kemler):</b>	80
. <b>EMS Number:</b>	F-A,S-B
. <b>Segregation groups</b>	Alkalis
. <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
. <b>Transport/Additional information:</b>	
. <b>ADR</b>	
. <b>Limited quantities (LQ)</b>	5L
. <b>Transport category</b>	3
. <b>Tunnel restriction code</b>	E
. <b>UN "Model Regulation":</b>	UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., 8, III

**SECTION 15: Regulatory information**

. **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**

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H361 Suspected of damaging fertility or the unborn child.

- R20 Harmful by inhalation.
- R22 Harmful if swallowed.
- R35 Causes severe burns.
- R36 Irritating to eyes.
- R36/38 Irritating to eyes and skin.
- R62 Possible risk of impaired fertility.
- R63 Possible risk of harm to the unborn child.

. **Contact:** e-mail: sida@tetenal.com

. **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 Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (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 Harmonized 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  
Acute Tox. 4: Acute toxicity, Hazard Category 4

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Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
Repr. 2: Reproductive toxicity, Hazard Category 2  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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

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