Safety Data Sheet

according to Regulation (EC) No 1907/2006

HYLINE HLU-31

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

1.1. Product identifier

HYLINE HLU-31

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

Use of the substance/mixture

Professional: Cleaner

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	HOBART GmbH	
Street:	Robert-Bosch-Strasse 17	
Place:	D-77656 Offenburg	
Telephone:	+49 (0) 781.600-0	Telefax: +49 (0) 781.600-23 19
e-mail:	info@hobart.de	
Internet:	www.hobart.de	
Responsible Department:	Dr. Gans-Eichler Chemieberatung GmbH Raesfeldstr. 22 D-48149 Münster	e-mail: info@tge-consult.de Tel.: +49(0)251/394868-69 www.tge-consult.de

1.4. Emergency telephone number:

Poison Center Berlin: +49 (0) 30-19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Substance or mixture corrosive to metals: Met. Corr. 1
Skin corrosion/irritation: Skin Corr. 1
Serious eye damage/eye irritation: Eye Dam. 1
Hazardous to the aquatic environment: Aquatic Acute 1
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
May be corrosive to metals.
Causes severe skin burns and eye damage.
Causes serious eye damage.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

caustic potash, potassium hydroxide
Sodium Hypochlorite

Signal word: Danger

Pictograms:

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe vapour/aerosol.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
1310-58-3	caustic potash, potassium hydroxide			5 -15 %
	215-181-3	019-002-00-8	01-2119487136-33	
	Met. Corr. 1, Acute Tox. 4, Skin Corr. 1A; H290 H302 H314			
1312-76-1	Silicic acid, potassium salt MR >3,2			1 - 5 %
	215-199-1		01-2119456888-17	
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid			1 - < 5 %
	253-733-5		01-2119436643-39	
	Met. Corr. 1, Eye Irrit. 2; H290 H319			
7681-52-9	Sodium Hypochlorite			1 - 5 %
	231-668-3	017-011-00-1	01-2119488154-34	
	Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1; H290 H314 H318 H335 H400 H410 EUH031			
				%

Full text of H and EUH statements: see section 16.

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data

sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician. In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks).

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Observe risk of aspiration if vomiting occurs. Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

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

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

First Aid, decontamination, treatment of symptoms.
In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Sand. Foam. Carbon dioxide (CO_2). Extinguishing powder. In case of major fire and large quantities: Water spray jet. Water mist.

Unsuitable extinguishing media

High power water jet

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO_2). Phosphorus oxides. Chlorine (Cl_2). Hydrogen chloride (HCl).

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment (refer to section 8).
Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.
High slip hazard because of leaking or spilled product.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into soil/subsoil. If required, notify relevant authorities according to all applicable regulations.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear suitable protective clothing. (See section 8.)
Do not mix with acids.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Further information on handling

Advices on general occupational hygiene: See section 8.
Shelf Life (months): 12

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Unsuitable materials for Container: Aluminium. Zinc.
Keep only in the original container in a cool, well-ventilated place away from acids. Keep container tightly closed. Handle and open container with care.
Make sure spills can be contained (e.g. sump pallets or kerbed areas).
Suitable floor material: Leachate-proof.

Advice on storage compatibility

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Organic peroxides. Self-reactive substances and mixtures. Radioactive substances. Infectious substances.

Further information on storage conditions

Protect against: Light. UV-radiation/sunlight. heat. moisture. frost.
storage temperature: (-)10 - 20°C

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
7782-50-5	Chlorine	-	-		TWA (8 h)	WEL
		0.5	1.5		STEL (15 min)	WEL
1310-58-3	Potassium hydroxide	-	-		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
1310-58-3	caustic potash, potassium hydroxide			
Worker DNEL, long-term		inhalation	local	1 mg/m³
Consumer DNEL, long-term		inhalation	local	1 mg/m³
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid			

Worker DNEL, long-term	inhalation	systemic	15 mg/m³
Worker DNEL, long-term	dermal	systemic	4,2 mg/kg bw/day
7681-52-9	Sodium Hypochlorite		
Worker DNEL, long-term	inhalation	systemic	1,55 mg/m³
Worker DNEL, acute	inhalation	systemic	3,1 mg/m³
Worker DNEL, acute	inhalation	local	3,1 mg/m³
Worker DNEL, long-term	inhalation	local	1,55 mg/m³
Consumer DNEL, long-term	oral	systemic	0,26 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	1,55 mg/m³
Consumer DNEL, long-term	inhalation	local	1,55 mg/m³

PNEC values

CAS No	Substance	
Environmental compartment		Value
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid	
Soil		0,491 mg/kg
Freshwater sediment		1,47 mg/kg
Freshwater (intermittent releases)		10,42 mg/l
Marine water		0,33 mg/l
Freshwater		3,33 mg/l
7681-52-9	Sodium Hypochlorite	
Freshwater		0,00021 mg/l
Marine water		0,000042 mg/l
Secondary poisoning		11,1 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,03 mg/l

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation.

Protective and hygiene measures

When using do not eat, drink or smoke.

Eye/face protection

Wear eye/face protection. DIN EN 166

Hand protection

Wear suitable gloves.
Suitable material:
FKM (fluororubber). - Thickness of glove material: 0,4 mm
Breakthrough time >= 8 h
Butyl rubber. - Thickness of glove material: 0,5 mm
Breakthrough time >= 8 h
CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm
Breakthrough time >= 8 h
NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time >= 8 h
PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm
Breakthrough time >= 8 h
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Protective clothing: Protective apron.
Standard: Protective clothing: EN 136, EN 137, EN 140, EN 143, EN 149,EN 405, EN 12941, EN 12942, EN 14387

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
-exceeding exposure limit values
-insufficient ventilation and aerosol or mist formation.
Suitable respiratory protective equipment: Combination filtering device (EN 14387) Type : B- P2/P3
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

The product needs to apply neutralizing agents before draining to wastewater treatment plants.
This material and its container must be disposed of in a safe way.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellow
Odour:	characteristic (Chlorine.)
pH-Value:	>13 (conc.); 12 (1 %in aqueous solution)

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Sublimation point:	No information available.
Softening point:	No information available.
Pour point:	No information available.
Flash point:	not determined
Sustaining combustion:	No data available

Flammability

Solid:	No information available.
Gas:	No information available.

Explosive properties

none

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	not determined

Auto-ignition temperature

Solid:	No information available.
Gas:	No information available.
Decomposition temperature:	No information available.
Oxidizing properties	
none	
Vapour pressure: (at 20 °C)	No information available.
Vapour pressure: (at 50 °C)	No information available.
Density (at 20 °C):	1,35 g/cm³
Bulk density:	No information available.
Water solubility:	miscible.
Solubility in other solvents	
miscible.	
Partition coefficient:	No information available.
Viscosity / dynamic:	< 30 mPa·s
Viscosity / kinematic:	No information available.
Flow time:	No information available.
Vapour density:	No information available.
Evaporation rate:	No information available.
Solvent separation test:	No information available.
Solvent content:	No information available.

9.2. Other information

Solid content:	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.
May cause decomposition by long-term light influence.
Decompostion takes place from temperatures above: 40°C
Decomposition under formation of: Chlorine (Cl2). Oxygen. (Danger of bursting container.)

10.3. Possibility of hazardous reactions

The product develops hydrogen in an aqueous solution in contact with metals. (Explosion hazard)
Contact with acids liberates toxic gas. (Chlorine.)

10.4. Conditions to avoid

heat. frost. UV-radiation/sunlight.

10.5. Incompatible materials

Materials to avoid: Strong acid. Base metals and alloys. Aluminium. Zinc. Lead. Oxidizing agents. Reducing agents. Amines. Ammonia.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO2). Phosphorus oxides. Chlorine (Cl2). Hydrogen chloride (HCl).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No information available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1310-58-3	caustic potash, potassium hydroxide				
	oral	LD50 333 mg/kg	Rat	ECHA	
1312-76-1	Silicic acid, potassium salt MR >3,2				
	oral	LD50 > 5000 mg/kg	Rat	ECHA dossier	
	dermal	LD50 > 5000 mg/kg			
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid				
	oral	LD50 > 6500 mg/kg	Rat.	Echa dossier	
	dermal	LD50 >4000 mg/kg	Rat.	Echa dossier	
	inhalation (4 h) aerosol	LC50 > 1,98 mg/l	Rat.	Echa dossier	
7681-52-9	Sodium Hypochlorite				
	oral	LD50 [1100] mg/kg	Rat	ECHA Dossier	
	dermal	LD50 20000 mg/kg	Rat	ECHA Dossier	
	inhalation (1 h) vapour	LC50 [10,5] mg/l	Rat	ECHA Dossier	

Irritation and corrosivity

Causes severe skin burns and eye damage.
Irritant effect on the eye: highly caustic.
Irritant effect on the skin: highly caustic.
Irritant effect on the respiratory tract: Irritant.

Sensitising effects

Based on available data, the classification criteria are not met.
Potassium Silicate: no danger of sensitization.
Sodium Hypochlorite : no danger of sensitization.
literature infomation: ECHA dossier

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
Sodium Hypochlorite :
No experimental indications of mutagenicity in-vivo exist.
Literature information: ECHA dossier
2-phosphonobutane-1,2,4-tricarboxylic acid:
In vitro mutagenicity/genotoxicity: Method: OECD 471 (Ames test). Result: negative.; Developmental toxicity/teratogenicity: Method: OECD 414. Species: Rat. Exposure duration: 20d. Result: NOEL 1000 mg/kg bw/day. Literature information: ECHA Dossier.

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.
Sodium Hypochlorite :
Subchronic oral toxicity (90d) NOAEL = 34,4 mg/kg (Mouse.)
Literature information: ECHA dossier
2-phosphonobutane-1,2,4-tricarboxylic acid:
Subchronic oral toxicity : Method: OECD 408. Species: Rat. Exposure duration: 90d. Test results: NOAEL >= 424 Mg/kg bw male Rat. >= 632Mg/kg bw female ,Rat. Literature information: ECHA Dossier.
2-phosphonobutane-1,2,4-tricarboxylic acid:
Subchronic oral toxicity:
Result: NOAEL = 424 mg/kg
Exposure time: 90 d
Species: Rat.

Aspiration hazard

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

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
1312-76-1	Silicic acid, potassium salt MR >3,2					
	Acute fish toxicity	LC50 > 146 mg/l	96 h	Leuciscus idus	ECHA dossier	
	Acute crustacea toxicity	EC50 > 146 mg/l	48 h	daphnia magna	ECHA dossier	
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid					
	Acute fish toxicity	LC50 > 1042 mg/l	96 h	Danio rerio	Echa dossier	
	Acute algae toxicity	ErC50 >140 mg/l	72 h	Desmodesmus subspicatus)	Echa dossier	
	Acute crustacea toxicity	EC50 > 1071 mg/l	48 h	Daphnia magna	Echa dossier	
	Fish toxicity	NOEC >1042 mg/l	14 d	Danio rerio	Echa dossier	
	Crustacea toxicity	NOEC 104 mg/l	21 d	Daphnia magna	Echa dossier	
7681-52-9	Sodium Hypochlorite					
	Acute fish toxicity	LC50 0,032 (TRO) mg/l	96 h	Fish ,various	ECHA Dossier	
	Acute algae toxicity	ErC50 0,4 mg/l	96 h	Myriophyllum spicatum	ECHA Dossier	
	Acute crustacea toxicity	EC50 0,035 mg/l	48 h	Ceriodaphnia dubia	ECHA Dossier	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid			
	OECD 302A / ISO 9887 / EEC 88/302 annex V, C.12	30-40%	90	Echa dossier
	Not easily bio-degradable (according to OECD-criteria).			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.
The statement is derived form the properties of the components.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid	-1,36

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances; hazardous waste

Waste disposal number of used product

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1719

14.2. UN proper shipping name: CAUSTIC ALKALI LIQUID, N.O.S. (Contains: potassium hydroxide, Sodium hypochlorite, solution)

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8

Classification code: C5

Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number:	UN 1719
14.2. UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (Contains: potassium hydroxide, Sodium hypochlorite, solution)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Classification code:	C5
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

14.1. UN number:	UN 1719
14.2. UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S .(contains: Potassiumhydroxide, Sodium Hypochlorite solution)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Marine pollutant:	YES
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1719
14.2. UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (contains: Potassiumhydroxide, Sodium Hypochlorite solution)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y840
Excepted quantity:	E2

IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Refer to section 6-8

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

No information available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

2010/75/EU (VOC):	No information available.
2004/42/EC (VOC):	No information available.
Information according to 2012/18/EU (SEVESO III):	E1 Hazardous to the Aquatic Environment

Additional information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII, No (mixture): 3

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Water contaminating class (D):	2 - clearly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
caustic potash, potassium hydroxide
Silicic acid, potassium salt MR >3,2
2-phosphonobutane-1,2,4-tricarboxylic acid
Sodium Hypochlorite

SECTION 16: Other information

Changes

Rev. 1,0: 29.02.2012
Rev. 1,01: 02.05.2012
Rev. 1,02: 08.05.2102
Rev. 1,03: 14.08.2012
Rev. 1,10: 16.06.2016 ; Changes in chapter: 1-16
Rev. 2,00; 04.10.2018; ; Changes in chapter: 1-16

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OSHA: Occupational Safety and Health Administration
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Rcglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln fuerGefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
WGK: Wassergefaehrdungsklasse

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data and / or calculated and / or estimated.
Skin Corr. 1; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)