



Be Right™

# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Issue Date 04-Jul-2005

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Version 5.1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code(s)** LCK353-1  
**Product Name** LCK 353 Sulfat/Sulphate/Sulfate, Sample cuvette; 1/2  
**Unique Formula Identifier (UFI)** VS35-6F5H-U800-S37J

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

**Recommended Use** Laboratory Reagent.  
**Uses advised against** Consumer use

### 1.3. Details of the supplier of the safety data sheet

#### **Supplier**

HACH UK  
Laser House  
Ground Floor, Suite B  
Waterfront Quay, Salford Quays  
GB - Manchester, M50 3XW  
Tel. +44 (0) 161 872 1487  
info-uk@hach.com

HACH Ireland  
Unit 34 GB Business Park  
Little Island  
IRL-Co. Cork  
T45 H681  
Tel. +353 (0)146 02 522  
info-ie@hach.com

### 1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service  
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

<b>Corrosive to metals</b>	Category 1 - (H290)
<b>Skin corrosion/irritation</b>	Category 1 - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)

### 2.2. Label elements

Regulation (EC) No 1272/2008

Contains n-Propanol, Hydrochloric acid 1%



### Signal word

Danger

### Hazard statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

### Precautionary Statements - EU (§28, 1272/2008)

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

P280 - Wear protective gloves/protective clothing and eye/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 or doctor

P390 - Absorb spillage to prevent material damage

### 2.3. Other hazards

No information available.

### PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
1,2,3-Propanetriol	56-81-5 200-289-5 -	1 - 5%	Not classified	-	-	-
n-Propanol	71-23-8	1 - 5%	Acute Tox. 4 - H302	-	-	-

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
	200-746-9 603-003-00-0		Eye Dam. 1 - H318 STOT SE 3 - H336			
Hydrochloric acid	7647-01-0 231-595-7 017-002-01-X	<1%	Met. Corr. 1 - H290 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335	Eye Irrit. 2 :: 10%<=C<25% Skin Corr. 1B :: C>=25% Skin Irrit. 2 :: 10%<=C<25% STOT SE 3 :: C>=10%	-	-

Chemical name	REACH registration number
n-Propanol	01-2119486761-29-xxxx
Hydrochloric acid	01-2119484862-27-xxxx

**Full text of H- and EUH-phrases: see section 16**

Acute Toxicity Estimate No information available

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
1,2,3-Propanetriol 56-81-5	12600 mg/kg	> 10000 mg/kg	None reported	None reported	None reported
n-Propanol 71-23-8	>= 1870 mg/kg	4000 mg/kg	None reported	13548 mg/L	None reported

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

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

**Symptoms** Burning sensation.

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

**Note to doctors** Treat symptomatically.

### **Section 5: FIREFIGHTING MEASURES**

#### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

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

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**Hazardous combustion products** None.

#### **5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Additional information** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### **Section 6: ACCIDENTAL RELEASE MEASURES**

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

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**For emergency responders** Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

#### **6.3. Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

#### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

**General hygiene considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep out of the reach of children. Store away from other materials.

### 7.3. Specific end use(s)

**Specific use(s)** Analytical reagent.  
**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure Limits

Chemical name	European Union	United Kingdom	Ireland
1,2,3-Propanetriol 56-81-5	-	TWA: 10 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>	-
n-Propanol 71-23-8	-	TWA: 200 ppm TWA: 500 mg/m <sup>3</sup> STEL: 250 ppm STEL: 625 mg/m <sup>3</sup> Sk*	TWA: 100 ppm STEL: 300 ppm Sk*
Hydrochloric acid 7647-01-0	TWA: 5 ppm TWA: 8 mg/m <sup>3</sup> STEL: 10 ppm STEL: 15 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 2 mg/m <sup>3</sup> STEL: 5 ppm STEL: 8 mg/m <sup>3</sup>	TWA: 8 mg/m <sup>3</sup> TWA: 5 ppm STEL: 10 ppm STEL: 15 mg/m <sup>3</sup>

**Information on monitoring procedures** Refer to European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) or equivalent national standard(s).

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**Additional information** No information available.

## 8.2. Exposure controls

**Engineering controls** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Personal protective equipment Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Barrier creams may help to protect the exposed areas of skin. Wear suitable gloves. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Short term	Wear protective nitrile rubber gloves	0,20 mm	>30 minutes
Long term (repeated)	Wear protective Viton™ gloves	0,70 mm	>480 minutes

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

**Respiratory protection** Ensure adequate ventilation. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**General hygiene considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical state** Liquid

**Colour** colourless

**Odour** Odourless

**Odour threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	

pH	2	@ 20 °C
Melting point/freezing point	~ -2 °C / 28.4 °F	
Initial boiling point and boiling range	~ 101 °C / 213.8 °F	
Evaporation rate	1.01 (water = 1)	
Vapour pressure	23.402 mm Hg / 3.12 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Partition Coefficient (n-octanol/water)	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	
Relative density	1.02 g/mL	@ 20 °C

**Solubility(ies)****Water solubility**

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

**Metal Corrosivity**

Classified as corrosive to metal according to CLP criteria

**Steel Corrosion Rate**

No data available

**Aluminum Corrosion Rate**

No data available

**Explosive properties****Upper explosion limit**

No data available

**Lower explosion limit**

No data available

**Flammable properties****Flash point**

No data available

**Flammability****Upper flammability limit:**

No data available

**Lower flammability limit**

No data available

**Oxidising properties**

No data available.

**Bulk density**

No data available

**9.2. Other information**

No information available.

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

**Reactivity** Corrosive to metal.

### 10.2. Chemical stability

**Stability** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

**Hazardous polymerisation** None under normal processing.

### 10.4. Conditions to avoid

**Conditions to avoid** Exposure to air or moisture over prolonged periods.

### 10.5. Incompatible materials

**Incompatible materials** Oxidising agent. Acids. Bases.

### 10.6. Hazardous decomposition products

**Hazardous Decomposition Products** Thermal decomposition can lead to release of irritating and toxic gases and vapours.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute toxicity

Based on available data, the classification criteria are not met

Mixture No data available.

Substance Test data reported below.

#### Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol	Rat LD <sub>50</sub>	12600 mg/kg	None reported	None reported	RTECS
Sodium chloride	Rat LD <sub>50</sub>	3000 mg/kg	None reported	None reported	IUCLID
n-Propanol	Rat LD <sub>50</sub>	>= 1870 mg/kg	None reported	None reported	No information available

#### Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol	Rabbit	> 10000	None reported	None reported	GESTIS



	LD <sub>50</sub>	mg/kg			
n-Propanol	Rabbit LD <sub>50</sub>	4000 mg/kg	None reported	None reported	HSDB

**Inhalation (Dust/Mist) Exposure Route:****Inhalation (Vapor) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
n-Propanol	Rat LC <sub>50</sub>	13548 mg/L	4 hours	None reported	Vendor SDS

**Acute Toxicity Estimate (ATE)**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATE<sub>mix</sub> (inhalation-dust/mist)</b>	71.57 mg/l
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**Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity.

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

**Skin corrosion/irritation**

Causes severe burns.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium chloride	Draize Test	Rabbit	500 mg	24 hours	Mild skin irritant	RTECS
n-Propanol	Open Irritation Test Draize Test	Rabbit	500 mg	None reported	Mild skin irritant	RTECS
Hydrochloric acid	Existing human experience	Human	None reported	None reported	Corrosive to skin	RTECS

**Serious eye damage/eye irritation**

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium chloride	Draize Test	Rabbit	100 mg	None reported	Mild eye irritant	RTECS
Hydrochloric acid	Existing human experience	Human	None reported	None reported	Corrosive to eyes	RTECS

**Respiratory or skin sensitisation**

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

Mixture No data available.

Substance No data available.

Chemical name	Test method	Species	Results	Key literature references and sources for data
n-Propanol	OECD Test No. 406: Skin Sensitisation	Guinea pig		Vendor SDS

#### STOT - single exposure

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

Mixture No data available.

Substance Test data reported below.

#### Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol	Human LD <sub>Lo</sub>	1428 mg/kg	None reported	<b>Kidney, Ureter, or Bladder</b> Changes in tubules (including acute renal failure, acute tubular necrosis)	RTECS
n-Propanol	Woman LD <sub>Lo</sub>	4000 mg/kg	None reported	<b>Cardiac</b> Other changes <b>Lungs, Thorax, or Respiration</b> Other changes	RTECS
Hydrochloric acid	Man LD <sub>Lo</sub>	2.857 mg/kg	None reported	<b>Vascular</b> BP lowering not characterized in autonomic section <b>Lungs, Thorax, or Respiration</b> Respiratory depression <b>Gastrointestinal</b> Other changes	RTECS

#### Inhalation (Dust/Mist) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
n-Propanol	Rat TC <sub>Lo</sub>	9.8 mg/L	4 hours	<b>Behavioral</b> General anesthetic <b>Lungs, Thorax, or Respiration</b> Other changes	RTECS

#### Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Hydrochloric acid	Human TC <sub>Lo</sub>	0.05 mg/L	None reported	<b>Lungs, Thorax, or Respiration</b> Cough	RTECS

#### STOT - repeated exposure

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

Mixture No data available.

Substance Test data reported below.

#### Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol	Rat TD <sub>Lo</sub>	96000 mg/kg	30 days	<b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase) <b>Blood</b>	RTECS
n-Propanol	Rat TD <sub>Lo</sub>	5621 mg/kg	7 days	<b>Liver</b> Other changes <b>Biochemical</b> Effect on specific coenzyme: B vitamins including folate	RTECS

#### Inhalation (Dust/Mist) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
n-Propanol	Rat TC <sub>Lo</sub>	0.020 mg/L	90 days	<b>Brain and Coverings</b> Other degenerative changes <b>Lungs, Thorax, or Respiration</b> Other changes <b>Liver</b> Multiple effects	RTECS

#### Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Hydrochloric acid	Rat TC <sub>Lo</sub>	0.000685 mg/L	84 days	<b>Behavioral</b> Muscle contraction or spasticity <b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase) <b>Kidney, Ureter, or Bladder</b> Other changes in urine composition	RTECS

#### Germ cell mutagenicity

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

Mixture invitro **Data** No data available.

Substance invitro **Data** Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
1,2,3-Propanetriol	DNA inhibition	Human lymphocyte	200 mmol/L	None reported	Positive test result for mutagenicity	RTECS
n-Propanol	Mutation in microorganisms	Escherichia coli	40000 mg/L	None reported	Positive test result for mutagenicity	RTECS

Hydrochloric acid	Cytogenetic analysis	Hamster lung	30 mmol/L	None reported	Positive test result for mutagenicity	RTECS
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Mixture **invivo Data** No data available.

Substance **invivo Data** Test data reported below.

**Oral Exposure Route:**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,2,3-Propanetriol	Cytogenetic analysis	Rat	1000 mg/kg	None reported	Positive test result for mutagenicity	RTECS

**Carcinogenicity**

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

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol	Mouse	87500 mg/kg	25 weeks	Lungs, Thorax, or Respiration Tumors	RTECS
n-Propanol	Rat TD <sub>Lo</sub>	50000 mg/kg	81 weeks	Liver Tumors Blood Leukemia	RTECS

**Reproductive toxicity**

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

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol	Rat TD <sub>Lo</sub>	100 mg/kg	None reported	Effects on Fertility Litter size (e.g. Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants))	RTECS

**Inhalation (Dust/Mist) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Hydrochloric acid	Rat TC <sub>Lo</sub>	0.450 mg/L	1 hours	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus) Specific Developmental Abnormalities Homeostasis	RTECS

**Inhalation (Vapor) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
n-Propanol	Rat TC <sub>Lo</sub>	7000 mg/L	7 hours	<b>Effects on Fertility</b> Male fertility index (e.g.	RTECS

**Aspiration hazard**

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

**11.2 Information on other hazards**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**11.2.2. Other information**

**Other adverse effects** No information available.

**Section 12: ECOLOGICAL INFORMATION****12.1. Toxicity****Ecotoxicity**

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

**Unknown aquatic toxicity**

Contains 0 % of components with unknown hazards to the aquatic environment.

**Mixture****Acute aquatic toxicity:**

No data available.

**Aquatic Chronic Toxicity:**

No data available.

**Substance****Acute aquatic toxicity:**

Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
n-Propanol	96 hours	<i>Pimephales promelas</i>	LC <sub>50</sub>	3800 mg/L	GESTIS

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2,3-Propanetriol	48 Hours	<i>Daphnia magna</i>	LC <sub>50</sub>	1955 mg/L	IUCLID
n-Propanol	48 Hours	<i>Daphnia magna</i>	LC <sub>50</sub>	1000 mg/L	GESTIS

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
n-Propanol	96 hours	None reported	EC <sub>50</sub>	4480 mg/L	GESTIS

**Aquatic Chronic Toxicity:**

Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2,3-Propanetriol	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>100</sub>	51000 mg/L	IUCLID

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
n-Propanol	48 hours	<i>Daphina magna</i>	EC <sub>50</sub>	3640 mg/L	GESTIS

**12.2. Persistence and degradability****Mixture** No data available.**12.3. Bioaccumulative potential****Mixture:** No data available.

Partition Coefficient (n-octanol/water) Not applicable

**12.4. Mobility in soil**

Soil Organic Carbon-Water Partition Coefficient Not applicable

**12.5. Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical name	PBT and vPvB assessment
1,2,3-Propanetriol	The substance is not PBT / vPvB
n-Propanol	The substance is not PBT / vPvB
Hydrochloric acid	The substance is not PBT / vPvB

**12.6. Endocrine disrupting properties**

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

**12.7. Other adverse effects**

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

**Section 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods****Advice on Disposal****Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Our local agencies will accept used cuvettes to ensure their proper disposal.**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and

discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Contaminated packaging**

Dispose of contents/containers in accordance with local regulations.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14: TRANSPORT INFORMATION

**IMDG**

14.1 UN number or ID number UN3316  
 14.2 Proper shipping name CHEMICAL KIT  
 14.3 Transport hazard class(es) 9  
 14.4 Packing Group Not regulated  
     Description UN3316, CHEMICAL KIT, 9  
 14.5 Marine pollutant Not applicable  
 14.6 Special precautions for user 251, 340  
     EmS-No F-A, S-P  
 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable

**ADR**

14.1 UN number or ID number UN3316  
 14.2 Proper shipping name CHEMICAL KIT  
 14.3 Transport hazard class(es) 9  
     Labels 9  
 14.4 Packing Group II  
     Description UN3316, CHEMICAL KIT, 9, II  
 14.5 Environmental hazards Not applicable  
 14.6 Special precautions for user 251, 340  
     Classification code M11  
     Tunnel restriction code (E)

**IATA**

14.1 UN number or ID number UN3316  
 14.2 Proper shipping name CHEMICAL KIT  
 14.3 Transport hazard class(es) 9  
 14.4 Packing group II  
     Description UN3316, CHEMICAL KIT, 9  
 14.5 Environmental hazards Not applicable  
 14.6 Special precautions for user See section 6-8 for more information  
     ERG Code 9L

**Additional information**

This product forms part of a kit. Information in this section relates to the kit as a whole.

## Section 15: REGULATORY INFORMATION

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

**National regulations****European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Take note of Directive 94/33/EC on the protection of young people at work

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
n-Propanol - 71-23-8	Use restricted. See item 75.	
Hydrochloric acid - 7647-01-0	Use restricted. See item 75.	

**Persistent Organic Pollutants** Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

• Non-controlled

**Named dangerous substances per Seveso Directive (2012/18/EU)**

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Hydrochloric acid - 7647-01-0	25	250

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**Germany**

**Water hazard class (WGK)** slightly hazardous to water (WGK 1)

**France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
n-Propanol 71-23-8	RG 84	-

**International Inventories**

<b>EINECS/ELINCS</b>	Complies
<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL - Existing substances</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies



**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

## 15.2. Chemical safety assessment

**Chemical Safety Report** Chemical safety assessments for substances in this mixture were not carried out.

## Section 16: OTHER INFORMATION

<b>Issue Date</b>	04-Jul-2005
<b>Revision Date</b>	16-May-2023
<b>Revision Note</b>	SDS sections updated, 1, 2, 8.

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Legend

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]
DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)
EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	NOAEL (No observed adverse effect level)
NOAEC	No observed adverse effect concentration
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labour)
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals

REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006]
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
TWA	TWA (time-weighted average)
SKN*	Skin designation
SKN+	Skin sensitisation
STEL	STEL (Short Term Exposure Limit)
STOT	Specific Target Organ Toxicity
STOT RE	Specific target organ toxicity — repeated exposure
STOT SE	Specific target organ toxicity — single exposure
SVHC	Substances of Very High Concern
TLV	Threshold Limit Value
TRGS	Technical rules for hazardous substances, Germany
TSCA	Toxic Substances Control Act
UN	United Nations
vPvB	very persistent and very bioaccumulative
VOC	Volatile organic compounds
AwSV	Administrative regulation of water polluting substances, Germany

**Key literature references and sources for data**

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

**Classification procedure**

<b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b>	<b>Method Used</b>
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method
Corrosive to metals	On basis of test data

**Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H290 - May be corrosive to metals

**Training Advice**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Restrictions on use**

For Laboratory Use Only.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**End of Safety Data Sheet**