



Be Right™

# SAFETY DATA SHEET

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

Issue Date 28-01-2005

Revision Date 30-Jul-2024

Version 3.2

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

### 1.1. Product identifier

**Product Code(s)** LCK502-1  
**Product Name** LCK 502 Ammonium, Sample cuvette; 1/2  
**Unique Formula Identifier (UFI)** ATG5-1FT3-Q808-DVTK

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

**Recommended Use** Laboratory Reagent. Determination of ammonium nitrogen.  
**Uses advised against** Consumer use

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

#### **Supplier**

HACH LANGE GmbH  
Willstätterstr. 11  
D-40549 Düsseldorf  
Tel: +49 (0)211 5288-383  
sds@hach.com

Responsible country contact:

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: Chemtrec: +44 20 3807 3798  
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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

### 2.2. Label elements

Classification according to Regulation (EC) No. 1272/2008 [CLP]



#### **Signal word**

Danger

#### **Hazard statements**

H290 - May be corrosive to metals

H318 - Causes serious eye damage

#### **Precautionary statements**

P234 - Keep only in original packaging

P280 - Wear 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 or doctor

P390 - Absorb spillage to prevent material damage

P201 - Obtain special instructions before use

P234 - Keep only in original container

P406 - Store in corrosive resistant stainless steel container with a resistant inner liner

### 2.3. Other hazards

Causes mild skin irritation.

#### 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)
Sodium salicylate	54-21-7 200-198-0 -	1 - 5%	Acute Tox. 4 - H302 Eye Irrit. 2 - H319 Repr. 2 - H361 STOT SE 3 - H335		-	-
Sodium hydroxide	1310-73-2 215-185-5 011-002-00-6	<1%	Met. Corr. 1 - H290 Skin Corr. 1A - H314 Eye Dam. 1 - H318	Eye Irrit. 2 :H319: 0.5%<=C<2% Skin Corr. 1A :H314: C>=5% Skin Corr. 1B :H314: 2%<=C<5% Skin Irrit. 2 :H315: 0.5%<=C<2%	-	-

Chemical name	REACH registration number
Sodium hydroxide	01-2119457892-27
Sodium salicylate	01-2119918289-28

**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
Sodium salicylate 54-21-7	930 mg/kg	None reported	None reported	None reported	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. Get medical attention immediately if symptoms occur.
<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.

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<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

<b>Symptoms</b>	Burning sensation. Prolonged contact may cause redness and irritation.
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#### **4.3. Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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### **Section 5: FIREFIGHTING MEASURES**

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

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	No information available.

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

<b>Specific hazards arising from the chemical</b>	Thermal decomposition can lead to release of irritating and toxic gases and vapours.
<b>Hazardous combustion products</b>	May emit acrid smoke and fumes.

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

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

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

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

<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so.
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#### **6.3. Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
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**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. Do not eat, drink or smoke when using this product.

**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.

### 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
Sodium hydroxide 1310-73-2	-	STEL: 2 mg/m <sup>3</sup>	STEL: 2 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

#### Notes

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

**Predicted No Effect Concentration (PNEC)** 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**

Tight sealing safety goggles.

**Hand protection**

Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. 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
Long term (repeated)	Wear protective Viton™ gloves	0.7 mm	>480 minutes
Short term	Wear protective nitrile rubber gloves	0.2 mm	>30 minutes

**Skin and body protection**

Wear suitable protective 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.

**Recommended filter type:**

ABEK-P3.

**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.

**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** Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	12.5	@ 20 °C
<b>Melting point / freezing point</b>	~ -1 °C / 30.2 °F	
<b>Initial boiling point and boiling range</b>	~ 100 °C / 212 °F	
<b>Evaporation rate</b>	1.01 (water = 1)	

Vapour pressure	23.702 mm Hg / 3.16 kPa at 25 °C / 77 °F
Relative vapor density	0.62
Partition coefficient	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
Completely soluble	> 10000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

**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. Strong acids. Strong 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 hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Based on available data, the classification criteria are not met

Mixture No data available.

Substance No data available.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium salicylate	Rat LD <sub>50</sub>	930 mg/kg	None reported	<b>Behavioral</b> Convulsions or effect on seizure threshold Muscle contraction or spasticity	RTECS

**Acute Toxicity Estimate (ATE)** Not applicable  
mg/kg

**Unknown acute toxicity**

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

**Skin corrosion/irritation**

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



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 salicylate	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Trisodium citrate	Draize Test	Rabbit	500 mg	24 hours	Not corrosive or irritating to skin	ECHA
Sodium hydroxide	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS

#### **Serious eye damage/eye irritation**

Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

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 salicylate	OECD Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method	Human	50 mg	6 hours	Eye irritant	ECHA
Trisodium citrate	Draize Test	Rabbit	0.1 mL	24 hours	Mild eye irritant	IUCLID
Sodium hydroxide	Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS

#### **Respiratory or skin sensitisation**

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

Mixture No data available.

Substance Test data reported below.

#### **Skin Sensitization Exposure Route:**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium salicylate	Based on human experience	Human	No sensitisation responses were observed.	Vendor SDS
Trisodium citrate	OECD Test No. 406: Skin Sensitisation	Guinea pig	No sensitisation responses were observed.	IUCLID

#### **Respiratory Sensitization Exposure Route:**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium salicylate	Based on human experience	Human	Not confirmed to be a respiratory sensitizer	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
Sodium salicylate	Human LD <sub>Lo</sub>	700 mg/kg	None reported	Lungs, Thorax, or Respiration Dyspnea	RTECS

#### STOT - repeated exposure

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

Mixture No data available.

Substance No data available.

#### 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
Sodium salicylate	OECD 471	<i>Salmonella typhimurium</i>	0.158 mg/plate	48 hours	Negative	No information available
Trisodium citrate	Mutation in microorganisms	<i>Salmonella typhimurium</i>	None reported	None reported	Negative	IUCLID

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
Sodium salicylate	DNA damage	Rat	30 mg/L	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
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Trisodium citrate	Rat	3000 mg/kg	2 years	Not Carcinogenic	IUCLID
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**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
Sodium salicylate	Rat TD <sub>Lo</sub>	40 mg/kg	1 days	Effects on Newborn Stillbirth	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** This product does not contain any known or suspected endocrine disruptors.

**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
Sodium salicylate	96 hours	<i>Pimephales promelas</i>	LC <sub>50</sub>	1370 mg/L	GESTIS
Sodium hydroxide	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	45.4 mg/L	IUCLID

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide	48 Hours	<i>Daphnia sp.</i>	EC <sub>50</sub>	40.4 mg/L	IUCLID

**Aquatic Chronic Toxicity:** No data available.

### **12.2. Persistence and degradability**

**Mixture** No data available.

### **12.3. Bioaccumulative potential**

**Mixture:** No data available.

**Partition coefficient** 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
Sodium salicylate	The substance is not PBT / vPvB
Sodium hydroxide	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 (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 (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.

<b>Contaminated packaging</b>	Dispose of contents/containers in accordance with local regulations.
<b>Other Information</b>	Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14: TRANSPORT INFORMATION

### ADR

14.1 UN number or ID number	3316
14.2 UN proper shipping name	CHEMICAL KIT
14.3 Transport hazard class(es)	9
14.4 Packing Group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	251, 340, 671
Classification code	M11
Tunnel restriction code	(E)

### IATA

14.1 UN number or ID number	UN3316
14.2 UN proper shipping name	Chemical kit
14.3 Transport hazard class(es)	9
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	A3, A803

### IMDG

14.1 UN number or ID number	UN3316
14.2 UN proper shipping name	CHEMICAL KIT
14.3 Transport hazard class(es)	9
14.4 Packing Group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	251, 340
EmS-No	F-A, S-P
14.7 Maritime transport in bulk according to IMO instruments	No information available

### **Additional information**

This product forms part of a kit. Information in this section relates to the kit as a whole. If the item is not regulated, the Chemical Kit classification does not apply.

## 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

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Sodium hydroxide - 1310-73-2	Use restricted. See entry 75.	

**Persistent Organic Pollutants** Not applicable

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

• Non-controlled

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

Not applicable

**Germany**

**Water hazard class (WGK)** non-hazardous to water (nwg)

Chemical name	French RG number	Title
Sodium salicylate 54-21-7	RG 15bis, RG 74	-

**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</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/NDSL** - 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**

**Issue Date** 28-01-2005  
**Revision Date** 30-Jul-2024  
**Revision Note** updated SDS sections:  
 3  
 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**

H314 - Causes severe skin burns and eye damage

**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

**Prepared By** Hach Product Compliance Department

**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**