

SAFETY DATA SHEET

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

Issue Date 07-Jan-2015 Revision Date 14-Feb-2023 Version 2.1

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

1.1. Product identifier

Product Code(s) 2408932

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0109 N

Molecular weight No data available

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

Recommended Use Laboratory Reagent. Titrant Solution.

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

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2. Label elements

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This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

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)

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

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

Acute Toxicity Estimate If LD50/LC50 data is not available or does not correspond to the classification

category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based

on its components

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice Take off contaminated clothing and shoes immediately. Show this safety data sheet to the

doctor in attendance.

Inhalation Remove to fresh air. If symptoms persist, call a doctor.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a

doctor.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a doctor.

Ingestion Rinse mouth.

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.

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

Symptoms No information available.

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

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Section 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

surrounding environment. Product itself does not burn.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

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 Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautionsDo not flush into surface water or sanitary sewer system. See Section 12 for additional

Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth,

diatomaceous earth, vermiculite) and place in container for disposal according to local /

national regulations (see Section 13).

Methods for cleaning up 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 Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapours/spray.

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General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

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 This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies

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 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.

Skin and body protection Avoid contact with eyes, skin and clothing.

Respiratory protection Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Wash hands before breaks and after work.

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

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Physical state Liquid

Colour colourless Odour sweet

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Molecular weight No data available

pH 9.9 @ 20 °C

Melting point / freezing point -5 °C / 23 °F

Initial boiling point and boiling range 99 °C / 210.2 °F

Evaporation rate 0.05 (water = 1)

Vapour pressure 21.677 mm Hg / 2.89 kPa at 25 °C / 77 °F

Relative vapor density 0.62

Specific Gravity 1.02

Partition coefficient Not applicable

Soil Organic Carbon-Water Partition

Coefficient

Not applicable

Autoignition temperature No data available

Decomposition temperatureNo information available

Dynamic viscosity No information available

Kinematic viscosity No information available

Relative density 1.02 g/mL @ 20 °C

Solubility(ies)

Water solubility

Water solubility classification_	Water solubility	Water Solubility Temperature_
Soluble	> 1000 ma/L	25 °C / 77 °F

Solubility in other solvents

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

Metal Corrosivity

Steel Corrosion Rate0.15 mm/yr / 0.01 in/yrAluminum Corrosion Rate0.08 mm/yr / 0 in/yr

Explosive properties

Upper explosion limitNo information availableLower explosion limitNo information available

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Flammable properties

Flash point $> 100 \, ^{\circ}\text{C} \, / \, 212 \, ^{\circ}\text{F}$

Method OC (open cup)

Flammability

Upper flammability limit:No data availableLower flammability limitNo data available

Oxidising properties No data available.

Bulk density Not applicable

9.2. Other information

No information available.

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Incompatible materialsNone known based on information supplied.

10.6. Hazardous decomposition products

Hazardous Decomposition Products None known based on information supplied.

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	Reported	Exposure	Toxicological effects	Ke	y literature references and

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	type	dose	time		sources for data
1,2-Propanediol	Rat	20000 mg/kg	None reported	None reported	RTECS
	LD ₅₀				
Disodium carbonate	Rat	4090 mg/kg	None reported	None reported	IUCLID
	LD ₅₀				
Tetrasodium EDTA,	Rat	2700 mg/kg	None reported	None reported	IUCLID
dihydrate	LD ₅₀		-	•	

Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2-Propanediol	Rabbit LD ₅₀	20800 mg/kg	None reported	None reported	IUCLID
Disodium carbonate	Mouse LD50	2210 mg/kg	None reported	None reported	No information available

Inhalation (Dust/Mist) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Disodium carbonate	Rat LC ₅₀	1.15 mg/L	4 hours	None reported	IUCLID

Acute Toxicity Estimate (ATE)

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 sulfate	Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Sodium thiosulfate	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Disodium carbonate	Draize Test	Rabbit	500 mg	24 hours	Mild skin irritant	ECHA HSDB

Serious eye damage/eye 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 sulfate	Draize Test	Rabbit	90 mg	24 hours	Not corrosive or	ECHA

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Sodium thiosulfate	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	75 mg	None reported	irritating to eyes Not corrosive or irritating to eyes	ECHA
Disodium carbonate	Draize Test	Rabbit	100 mg	24 hours	Eye irritant	HSDB

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 sulfate	OECD Test No. 406: Skin Sensitisation	Guinea pig	No sensitisation responses were observed.	HSDB

STOT - single exposure

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

Mixture No data available.

Substance No data available.

STOT - repeated exposure

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

Mixture No data available.

Substance Test data reported below.

Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
1,2-Propanediol	Rat	2.180 mg/L	90 days	Behavioral	RTECS
	TCLo			Food intake	
				Biochemical	
				Enzyme inhibition, induction, or	
				change in blood or tissue levels	
				(dehydrogenases)	
				Endocrine	
				Changes in spleen weight	

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-Propanediol	Cytogenetic analysis	Hamster fibroblast	32000 mg/L	None reported	Positive test result for	RTECS

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mutagenicity

Mixture invivo **Data**No data available.

Substance invivo **Data** No data available.

Carcinogenicity

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

Mixture No data available.

Substance No data available.

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	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
Sodium sulfate	Mouse TDLo	14000 mg/kg	4 days	Effects on Newborn Other neonatal measures or effects	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 toxicityContains 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	Species	Endpoint type	Reported dose	Key literature references and

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	time				sources for data
1,2-Propanediol	96 hours	Pimephales promelas	LC50	51400 mg/L	IUCLID
Sodium sulfate	96 hours	None reported	LC50	56 mg/L	IUCLID
Sodium thiosulfate	96 hours	Gambusia affinis	LC50	24000 mg/L	IUCLID
Disodium carbonate	96 hours	Lepomis macrochirus	LC ₅₀	300 mg/L	IUCLID

Crustacea:

Chemical name	Exposure	Species	Endpoint type	Reported dose	Key literature references and
	time				sources for data
1,2-Propanediol	48 Hours	Daphnia magna	LC ₅₀	34400 mg/L	IUCLID
Sodium sulfate	48 Hours	Daphnia magna	EC ₅₀	3150 mg/L	IUCLID
Disodium carbonate	48 Hours	Daphnia magna	EC ₅₀	265 mg/L	IUCLID

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2-Propanediol	96 hours	Selenastrum capricornutum	EC ₅₀	19000 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 Not ap

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.

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

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Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

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 packagingDispose of contents/containers in accordance with local regulations.

Other Information Do not reuse empty containers.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN number or ID numberNot regulated14.2 Proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing GroupNot regulated14.5 Marine pollutantNot applicable

14.6 Special precautions for user See section 6-8 for more information

14.7. Transport in bulk according to Not applicable

Annex II of MARPOL and the IBC

Code

ADR

14.1 UN number or ID numberNot regulated14.2 Proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing GroupNot regulated14.5 Environmental hazardsNot applicable

14.6 Special precautions for user See section 6-8 for more information

IATANot regulated14.1 UN number or ID numberNot regulated14.2 Proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated

14.5 Environmental hazards Not applicable14.6 Special precautions for userSee section 6-8 for more information

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

Section 15: REGULATORY INFORMATION

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

National regulations

European Union

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

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) slightly hazardous to water (WGK 1)

France

Occupational Illnesses (R-463-3, France)

International Inventories

Complies **EINECS/ELINCS** Complies **TSCA** Complies **DSL/NDSL** Complies **ENCS** Complies **IECSC KECL - Existing substances** Complies **PICCS** Complies **AICS** 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.

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One mean surety assessments for substances in this mixture were not carried out.

Section 16: OTHER INFORMATION

 Issue Date
 07-Jan-2015

 Revision Date
 14-Feb-2023

Revision Note New SDS, SDS sections updated, 3, 9, 11, 12.

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 (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 (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])

RID Règlement international concernant le transport des marchandises dangereuses par chemin

de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

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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

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

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

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