

SAFETY DATA SHEET

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

Issue Date 14-Sep-2016 Revision Date 14-Feb-2023 Version 1.9

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

1.1. Product identifier

Product Code(s) 2267410

Product Name Sulfite Equivalent Standard Solution 5000 mg/l as SO₃

Molecular weight No data available

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

Recommended Use Water Analysis. Standard 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 No information available

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 contactWash 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

Note to doctors Treat symptomatically.

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Section 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the **Suitable 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.

Use personal protection recommended in Section 8. For emergency responders

6.2. Environmental precautions

Environmental precautions Do 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).

Take up mechanically, placing in appropriate containers for disposal. Soak up with inert Methods for cleaning up

absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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

6.4. Reference to other sections

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

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapours/spray. Advice on safe handling

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

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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. Wash contaminated clothing before reuse.

Respiratory protection Ensure adequate ventilation. Wear breathing apparatus if exposed to

vapours/dusts/aerosols.

Recommended filter type: ABEK-P3.

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

Odour Odourless Colour colourless

Odour threshold Not applicable

Values Remarks • Method **Property**

Molecular weight No data available

@ 20 °C рΗ 7.9

Melting point / freezing point ~ 0 °C / 32 °F

Initial boiling point and boiling range ~ 100 °C / 212 °F

0.74 (water = 1)**Evaporation rate**

23.702 mm Hg / 3.16 kPa at 25 °C / 77 °F Vapour pressure

Relative vapor density No data available

Specific Gravity 0.996

Not applicable **Partition coefficient**

Soil Organic Carbon-Water Partition

Coefficient

Not applicable

Autoignition temperature No data available **Decomposition temperature** No data available No data available **Dynamic viscosity**

Kinematic viscosity

No data available Relative density 0.996 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	<u>Solubility</u>	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

Metal Corrosivity

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

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Flammable properties

Flash point No data available

Flammability

Upper flammability limit:No data availableLower flammability limitNo 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 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:

ſ	Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
		type	dose	time		sources for data
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Toluene	Rat	636 mg/kg	None reported	None reported	ERMA
	LD50				
Disodium carbonate	Rat	4090 mg/kg	None reported	None reported	IUCLID
	LD ₅₀		·	·	
Tetrasodium EDTA	Rat	1658 mg/kg	None reported	None reported	ERMA
	LD ₅₀			·	

Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Disodium carbonate	Mouse LD ₅₀	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 LC₅₀	1.15 mg/L	4 hours	None reported	IUCLID

Inhalation (Vapor) Exposure Route:

	Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
L		type	dose	time		sources for data
	Toluene	Rat LC ₅₀	12.5 mg/L	4 hours	None reported	NITE

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 thiosulfate	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Toluene	Draize Test	Rabbit	20 mg	24 hours	Skin irritant	RTECS
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	Exposure	Results	Key literature
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			dose	time		references and sources for data
Sodium thiosulfate	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	75 mg	None reported	Not corrosive or irritating to eyes	ECHA
Toluene	Draize Test	Rabbit	2 mg	24 hours	Eye irritant	RTECS
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 No data available.

STOT - single 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
Toluene	Human	100 mg/L	None reported	Behavioral	RTECS
	TCLo			Hallucinations, Distorted	
				perceptions	
				Decreased locomotor activity	

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 type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Toluene	Rat	300 mg/L	730 days	Blood	RTECS
	TCLo		-	Pigmented or nucleated red	
				blood cells	
				Nutritional and Gross	
				Metabolic	
				Weight loss or decreased weight	
				gain	

Germ cell mutagenicity

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

Mixture invitro **Data** No data available.

Substance invitro **Data** No data available.

Mixture invivo **Data** No data available.

Substance invivo **Data** No data available.

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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.

Inhalation (Dust/Mist) Exposure Route:

Chemic	al name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Tolu	uene	Rat TC∟₀	0.8 mg/L	6 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus) Effects on Newborn	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.

<u>Substance</u>

Acute aquatic toxicity: Test data reported below.

Fish:

Chemical name	Exposure	Species	Endpoint type	Reported dose	Key literature references and
	time				sources for data
Sodium thiosulfate	96 hours	Gambusia affinis	LC ₅₀	24000 mg/L	IUCLID
Toluene	96 hours	Oncorhynchus mykiss	LC ₅₀	5.8 mg/L	ERMA
Disodium carbonate	96 hours	Lepomis macrochirus	LC ₅₀	300 mg/L	IUCLID

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Crustacea:

Chemical name	Exposure	Species	Endpoint type	Reported dose	Key literature references and
	time				sources for data
Toluene	48 Hours	Daphnia magna	EC ₅₀	11.5 mg/L	ERMA
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
Toluene	72 Hours	Selenastrum capricornutum	EC50	12.5 mg/L	ERMA

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 applicable

Coefficient

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

Waste from residues/unused

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

products environmental legislation.

Waste disposal number of waste from residues/unused products

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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

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

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 Do not reuse empty containers.

Section 14: TRANSPORT INFORMATION

IMDG

Not regulated 14.1 UN number or ID number Not regulated 14.2 Proper shipping name 14.3 Transport hazard class(es) Not regulated 14.4 Packing Group Not regulated 14.5 Marine pollutant Not applicable

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

14.7. Transport in bulk according to Not applicable

Annex II of MARPOL and the IBC

Code

ADR

14.1 UN number or ID number Not regulated 14.2 Proper shipping name Not regulated 14.3 Transport hazard class(es) Not regulated 14.4 Packing Group Not regulated 14.5 Environmental hazards Not applicable

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

IATA Not regulated 14.1 UN number or ID number Not regulated 14.2 Proper shipping name Not regulated 14.3 Transport hazard class(es) Not regulated 14.4 Packing group Not regulated Not applicable 14.5 Environmental hazards

14.6 Special precautions for user See 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

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

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

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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)

International Inventories

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

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 14-Sep-2016

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

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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.

1272/20081

DNEL Derived No Effect Level (DNEL)

EC European Community

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 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

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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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