SAFETY DATA SHEET
(SDS)

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008, (EU) No. 2015/830

Revision Date 29-Mar-2016 **WAI2 - EGHS - EUROPEAN** **Revision Number** 2

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name Chlorine Dioxide

Product No AC4099-AMP
Unique Formula Identifier (UFI) Not applicable

REACH registration number Not applicable

Pure substance/mixture Mixture

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

Recommended Use Use as laboratory reagent

Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Manufacturer, Importer, Supplier
Thermo Fisher Scientific
Robert-Bosch-Str. 163505
Langenselbold, GERMANY
Tel.: +49 (6184) 90-6000

E-mail address info.water@thermo.com

Made in USA

1.4. Emergency telephone number

24 Hour Emergency Phone Number
CHEMTREC®
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: 1-703-527-3887
(collect calls accepted)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification - Mixture

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

Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

Signal Word
Warning

Hazard Statements
H319 - Causes serious eye irritation

Precautionary Statements
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P264 - Wash face, hands and any exposed skin thoroughly after handling
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

Combustible liquid

General Hazards This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No	CAS No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567	REACH Reg. No
Water	EEC No. 231-791-2	7732-18-5	90 - 100%	Not classified	No information available
Acetone	EEC No. 200-662-2	67-64-1	0 - 10%	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) (EUH066) STOT SE 3 (H336)	No information available
Proprietary Ingredients	-	999-99-9	0 - 10%		No information available
Potassium Dihydrogen Phosphate	EEC No. 231-913-4	7778-77-0	0 - 10%	Not classified	No information available
N,N-diethyl-p-phenylenediamine oxalate	EEC No. 263-662-1	62637-92-7	0 - 10%		No information available

Component	CAS No	Specific concentration limits (SCL's)	M-Factor	Component notes
Water	7732-18-5	-	-	-
Acetone	67-64-1	-	-	-
Proprietary Ingredients	999-99-9	-	-	-
Potassium Dihydrogen Phosphate	7778-77-0	-	-	-
N,N-diethyl-p-phenylenediamine oxalate	62637-92-7	-	-	-

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Self-Protection of the First Aider Use personal protective equipment as required. See section 8 for more information. 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.

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

Most important symptoms and effects Difficulty in breathing

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

Notes to Physician Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Water mist may be used to cool closed containers.

Unsuitable Extinguishing Media
No information available

5.2. Special hazards arising from the substance or mixture

Combustible material. Containers may explode when heated.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Environmental Precautions Should not be released into the environment. See Section 12 for additional Ecological

Information.

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. Pick up and transfer to properly labeled containers.

Reference to Other Sections
Refer to protective measures listed in Sections 7 and 8
See Section 8 for information on appropriate personal protective equipment
See Section 12 for additional Ecological Information
See Section 13 for additional waste treatment information

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition.

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

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

7.3. Specific end use(s)

Specific Use(s)
Use as laboratory 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
List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE -** 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	European Union	The United Kingdom	France	Belgium	Spain
Acetone	TWA: 500 ppm (8h) TWA: 1210 mg/m³ (8h)	STEL: 1500 ppm 15 min STEL: 3620 mg/m³ 15 min TWA: 500 ppm 8 hr TWA: 1210 mg/m³ 8 hr	TWA / VME: 500 ppm (8 heures). restrictive limit TWA / VME: 1210 mg/m³ (8 heures). restrictive limit STEL / VLCT: 1000 ppm. restrictive limit STEL / VLCT: 2420 mg/m³. restrictive limit	TWA: 246 ppm 8 uren TWA: 594 mg/m³ 8 uren STEL: 492 ppm 15 minuten STEL: 1187 mg/m³ 15 minuten	TWA / VLA-ED: 500 ppm (8 horas) TWA / VLA-ED: 1210 mg/m³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Acetone	TWA: 500 ppm 8 ore. Time Weighted Average TWA: 1210 mg/m³ 8	TWA: 500 ppm (8 Stunden). AGW - exposure factor 2	STEL: 750 ppm 15 minutos TWA: 500 ppm 8 horas	STEL: 2420 mg/m³ 15 minuten TWA: 1210 mg/m³ 8	TWA: 500 ppm 8 tunteina TWA: 1200 mg/m³ 8

	ore. Time Weighted Average	TWA: 1200 mg/m³ (8 Stunden). AGW - exposure factor 2 TWA: 500 ppm (8 Stunden). MAK TWA: 1200 mg/m³ (8 Stunden). MAK Höhepunkt: 1000 ppm Höhepunkt: 2400 mg/m³	TWA: 1210 mg/m³ 8 horas	uren	tunteina STEL: 630 ppm 15 minuutteina STEL: 1500 mg/m³ 15 minuutteina

Component	Austria	Denmark	Switzerland	Poland	Norway
Acetone	MAK-KZGW: 2000 ppm 15 Minuten MAK-KZGW: 4800 mg/m³ 15 Minuten MAK-TMW: 500 ppm 8 Stunden MAK-TMW: 1200 mg/m³ 8 Stunden	TWA: 250 ppm 8 timer TWA: 600 mg/m³ 8 timer STEL: 500 ppm 15 minutter STEL: 1200 mg/m³ 15 minutter	STEL: 1000 ppm 15 Minuten STEL: 2400 mg/m³ 15 Minuten TWA: 500 ppm 8 Stunden TWA: 1200 mg/m³ 8 Stunden	STEL: 1800 mg/m³ 15 minutach TWA: 600 mg/m³ 8 godzinach	TWA: 125 ppm 8 timer TWA: 295 mg/m³ 8 timer STEL: 156.25 ppm 15 minutter. value calculated STEL: 368.75 mg/m³ 15 minutter. value calculated

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Acetone	TWA: 600 mg/m³ STEL : 1400 mg/m³	TWA-GVI: 500 ppm 8 satima. TWA-GVI: 1210 mg/m³ 8 satima.	TWA: 500 ppm 8 hr. TWA: 1210 mg/m³ 8 hr. STEL: 1500 ppm 15 min STEL: 3630 mg/m³ 15 min	Skin-potential for cutaneous absorption TWA: 500 ppm TWA: 1210 mg/m³	TWA: 800 mg/m³ 8 hodinách. Ceiling: 1500 mg/m³

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Acetone	TWA: 500 ppm 8 tundides. TWA: 1210 mg/m³ 8 tundides.	TWA: 500 ppm 8 hr TWA: 1210 mg/m³ 8 hr	STEL: 3560 mg/m³ TWA: 1780 mg/m³	TWA: 1210 mg/m³ 8 órában. AK	TWA: 250 ppm 8 klukkustundum. TWA: 600 mg/m³ 8 klukkustundum. Ceiling: 500 ppm Ceiling: 1200 mg/m³

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Acetone	TWA: 500 ppm TWA: 1210 mg/m³	TWA: 500 ppm IPRD TWA: 1210 mg/m³ IPRD STEL: 1000 ppm STEL: 2420 mg/m³	TWA: 500 ppm 8 Stunden TWA: 1210 mg/m³ 8 Stunden	TWA: 500 ppm TWA: 1210 mg/m³	TWA: 500 ppm 8 ore TWA: 1210 mg/m³ 8 ore

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Acetone	TWA: 200 mg/m³ 1763 MAC: 800 mg/m³	TWA: 500 ppm TWA: 1210 mg/m³	TWA: 500 ppm 8 urah TWA: 1210 mg/m³ 8 urah STEL: 2420 mg/m³ 15 minutah STEL: 1000 ppm 15 minutah	Indicative STEL: 500 ppm 15 minuter Indicative STEL: 1200 mg/m³ 15 minuter TLV: 250 ppm 8 timmar. NGV TLV: 600 mg/m³ 8 timmar. NGV	TWA: 500 ppm 8 saat TWA: 1210 mg/m³ 8 saat
Potassium Dihydrogen Phosphate	MAC: 10 mg/m³				

Biological limit values
List source(s):

Component	European Union	United Kingdom	France	Spain	Germany
Acetone			Acetone: 100 mg/L urine end of shift	Acetone: 50 mg/L urine end of shift	Acetone: 80 mg/L urine (end of shift)

Component	Italy	Finland	Denmark	Bulgaria	Romania
Acetone				Acetone: 80 mg/L urine at the end of exposure or end of work shift	Acetone: 50 mg/L urine end of shift

Component	Gibraltar	Latvia	Slovak Republic	Luxembourg	Turkey
Acetone			Acetone: 80 mg/L urine end of exposure or work shift		

Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours

Derived No Effect Level (DNEL)
See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Acetone 67-64-1 (0 - 10%)				DNEL = 186mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Acetone 67-64-1 (0 - 10%)	DNEL = 2420mg/m³			DNEL = 1210mg/m³
Potassium Dihydrogen Phosphate 7778-77-0 (0 - 10%)				DNEL = 14.82mg/m³

Predicted No Effect Concentration (PNEC)
See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Acetone 67-64-1 (0 - 10%)	PNEC = 10.6mg/L	PNEC = 30.4mg/kg sediment dw	PNEC = 21mg/L	PNEC = 100mg/L	PNEC = 29.5mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Acetone 67-64-1 (0 - 10%)	PNEC = 1.06mg/L	PNEC = 3.04mg/kg sediment dw			

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Eye/face Protection Wear chemical splash goggles and face shield. If splashes are likely to occur:. Goggles.

Skin and body protection Wear protective gloves/protective clothing.

Respiratory Protection No protective equipment is needed under normal use conditions. In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless to pale pink
Odor	Odorless
Odor Threshold	No information available
pH	6.3
PH Range	4.8-7.8

Property	**Values**	**Remarks • Method**
Melting point/freezing point	No information available	
Boiling Point/Range	94 °C / 201.2 °F	
Flash Point (High in °C)	75 °C / 167 °F	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature	-	
Decomposition Temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive Properties		
Oxidizing Properties	No information available	

9.2. Other information

Softening Point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density	No Information available
Bulk Density	No information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
No information available

10.2. Chemical stability
Stable under normal conditions

Explosion Data

Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None

10.3. Possibility of hazardous reactions
None under normal processing

10.4. Conditions to avoid
Keep away from open flames, hot surfaces and sources of ignition

10.5. Incompatible materials
No information available

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

Acute Toxicity No information available
Unknown Acute Toxicity 1.2 % of the mixture consists of ingredient(s) of unknown toxicity.
The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (inhalation-dust/mist) 2,505.00 mg/L

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg (Rat)		
Acetone	LD50 = 5800 mg/kg (Rat)	LD50 > 15700 mg/kg (Rabbit)	LC50 = 50100 mg/m³ (Rat) 8 h
Potassium Dihydrogen Phosphate	LD50 = 3200 mg/kg (Rat)		LC50 > 0.83 mg/L (Rat) 4 h

Skin Corrosion/Irritation No information available

Serious eye damage/eye irritation No information available

Sensitization No information available

Mutagenic Effects No information available

Carcinogenic effects No information available

Reproductive Effects No information available

STOT - single exposure No information available

STOT - repeated exposure No information available

Target Organs None known.

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Aspiration hazard No information available

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity effects .

2.2% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Acetone	-	LC50: = 8300 mg/L, 96h (Lepomis macrochirus) LC50: 6210 - 8120 mg/L, 96h static	EC50: 12600 - 12700 mg/L, 48h (Daphnia magna) EC50: 10294 - 17704 mg/L, 48h

		(Pimephales promelas) LC50: 4.74 - 6.33 mL/L, 96h (Oncorhynchus mykiss)	Static (Daphnia magna)

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Component	log Pow	Bioconcentration factor (BCF)
Acetone	-0.24	0.69 dimensionless

12.4. Mobility in soil

Component	log Pow
Acetone 67-64-1 (0 - 10%)	-0.24

12.5. Results of PBT and vPvB assessment
No information available

12.6. Endocrine disrupting properties
This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects
Persistent Organic Pollutant This product does not contain any known or suspected substance
Ozone Depletion Potential This product does not contain any known or suspected substance

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

Other Information Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN-No Not Regulated
14.2 Proper Shipping Name Not Regulated
14.3 Hazard Class Not Regulated
14.4 Packing Group Not Regulated
14.5 Marine Pollutant Not Applicable
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

ADR

14.1. UN number Not Regulated

14.2. UN proper shipping name Not Regulated
14.3. Transport hazard class(es) Not Regulated
14.4. Packing group Not Regulated

ICAO

14.1 UN-No Not Regulated
14.2 Proper Shipping Name Not Regulated
14.3 Hazard Class Not Regulated
14.4 Packing Group Not Regulated
14.5 Environmental hazard Not Applicable
14.6 Special Provisions None

IATA

14.1 UN-No Not Regulated
14.2 Proper Shipping Name Not Regulated
14.3 Hazard Class Not Regulated
14.4 Packing Group Not Regulated
14.5 Environmental hazard Not Applicable
14.6 Special Provisions None

SECTION 15: REGULATORY INFORMATION

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

International Inventories
Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS), U.S.A. (TSCA).

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Water	7732-18-5	231-791-2	-	-	X	X	KE-35400	X	-
Acetone	67-64-1	200-662-2	-	-	X	X	KE-29367	X	X
Proprietary Ingredients	999-99-9	-	-	-	-	-	-	-	-
Potassium Dihydrogen Phosphate	7778-77-0	231-913-4	-	-	X	X	KE-28622	X	X
N,N-diethyl-p-phenylenediamine oxalate	62637-92-7	263-662-1	-	-	X	X	-	-	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Water	7732-18-5	X	ACTIVE	X	-	X	X	X
Acetone	67-64-1	X	ACTIVE	X	-	X	X	X
Proprietary Ingredients	999-99-9	-	-	-	-	-	-	-
Potassium Dihydrogen Phosphate	7778-77-0	X	ACTIVE	X	-	X	X	X
N,N-diethyl-p-phenylenediamine oxalate	62637-92-7	X	ACTIVE	X	-	-	X	-

Legend: X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

European Union

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)

Water	7732-18-5	-	-	-
Acetone	67-64-1	-	Use restricted. See item 75. (see link for restriction details)	-
Proprietary Ingredients	999-99-9	-	-	-
Potassium Dihydrogen Phosphate	7778-77-0	-	-	-
N,N-diethyl-p-phenylenediamine oxalate	62637-92-7	-	-	-

https://echa.europa.eu/substances-restricted-under-reach

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals
Not applicable

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

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

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification Water endangering class = 1 (self classification)

Component	Germany - Water Classification (AwSV)
Acetone 67-64-1 (0 - 10%)	WGK1
Potassium Dihydrogen Phosphate 7778-77-0 (0 - 10%)	WGK1

Component	France - INRS (Tables of occupational diseases)
Acetone	Tableaux des maladies professionnelles (TMP) - RG 84

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Acetone 67-64-1 (0 - 10%)		Group I	
N,N-diethyl-p-phenylenediamine oxalate 62637-92-7 (0 - 10%)	Prohibited and Restricted Substances		

15.2. Chemical safety assessment

A Chemical safety assessment according to regulation (EC) No. 1907/2006 is not required

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H336 - May cause drowsiness or dizziness
EUH066 - Repeated exposure may cause skin dryness or cracking
H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

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

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic
TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor
TWA TWA (time-weighted average)
Ceiling Maximum limit value
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - (Volatile Organic Compound)
STEL STEL (Short Term Exposure Limit)

Key literature references and sources for data
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Full text of H-Statements referred to under section 3
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H225 - Highly flammable liquid and vapor
EUH066 - Repeated exposure may cause skin dryness or cracking

Prepared By	Regulatory Affairs
Prepared For	Thermo Fisher Scientific Inc.
Issue Date	No information available
Revision Date	29-Mar-2016
Reason for revision	SDS sections updated.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended. .

Disclaimer
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End of Safety Data Sheet