

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 13-Nov-2013 Revision Date 25-Sep-2023 Revision Number 9

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

#### 1.1. Product identifier

Product Description: Methyl methacrylate, stabilized

Cat No.: 127140000; 127140010; 127140025; 127140250; 127140100

Synonyms MMA

Index No 607-035-00-6
CAS No 80-62-6
Molecular Formula C5 H8 O2

REACH registration number 01-2119452498-28

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

Recommended Use Laboratory chemicals.

Sector of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

**Product category** PC21 - Laboratory chemicals

**Process categories** PROC15 - Use as a laboratory reagent

Environmental release category ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Uses advised against No Information available

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

Company

UK entity/business name

Fisher Scientific UK Bishop Meadow Road,

Loughborough, Leicestershire LE11 5RG, United Kingdom

**EU entity/business name** Thermo Fisher Scientific

Janssen Pharmaceuticalaan 3a, 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## **SECTION 2: HAZARDS IDENTIFICATION**

## 2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

**Physical hazards** 

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Flammable liquids Category 2 (H225)

#### **Health hazards**

Skin Corrosion/Irritation
Skin Sensitization
Specific target organ toxicity - (single exposure)

Category 2 (H315)
Category 1 (H317)
Category 3 (H335)

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



Signal Word

Danger

#### **Hazard Statements**

H225 - Highly flammable liquid and vapor

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H335 - May cause respiratory irritation

## **Precautionary Statements**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P280 - Wear eye protection/ face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor/physician

## 2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB) Lachrymator (substance which increases the flow of tears)

This product does not contain any known or suspected endocrine disruptors

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Methyl methacrylate	80-62-6	EEC No. 201-297-1	>95	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) Skin Sens. 1 (H317)

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	STOT SE 3 (H335)
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Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Methyl methacrylate	STOT SE 3 (H335) :: C>=10%	=	-

Note

Stabiliser: Methylhydroquinone

REACH registration number	01-2119452498-28
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Full text of Hazard Statements: see section 16

## **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

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 soap and plenty of water while removing all contaminated

clothes and shoes. In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Do NOT induce vomiting. Clean mouth with water. Get medical attention.

**Inhalation** Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial

respiration. Get medical attention.

Self-Protection of the First Aider 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

May cause allergic skin reaction. Difficulty in breathing. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness,

lightheadedness, chest pain, muscle pain or flushing: Inhalation of high vapor

concentrations may cause symptoms like headache, dizziness, tiredness, nausea and

vomiting

#### 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**

Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical. Water mist may be used to cool closed containers. Water mist may be used to cool closed containers.

#### Extinguishing media which must not be used for safety reasons

Water.

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

Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may

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explode when heated. Vapors may form explosive mixtures with air.

#### **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO2).

#### 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

Remove all sources of ignition. Take precautionary measures against static discharges.

#### 6.2. 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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Do not let this chemical enter the environment.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Handle product only in closed system or provide appropriate exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

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

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Refrigerator/flammables. Inhibitor levels should be maintained.

Technical Rules for Hazardous Substances (TRGS) 510 Class 3 Storage Class (LGK) (Germany)

## 7.3. Specific end use(s)

Use in laboratories

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## **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	The United Kingdom	European Union	Ireland
Methyl methacrylate	STEL: 100 ppm 15 min	TWA: 50 ppm (8h)	TWA: 50 ppm 8 hr.
	STEL: 416 mg/m <sup>3</sup> 15 min	STEL: 100 ppm (15min)	STEL: 100 ppm 15 min
	TWA: 50 ppm 8 hr		
	TWA: 208 mg/m <sup>3</sup> 8 hr		

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Compon	ent	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Methyl metha 80-62-6 ( :	,	DNEL = 1.5mg/cm2		DNEL = 1.5mg/cm2	DNEL = 13.67mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Methyl methacrylate	DNEL = 416mg/m <sup>3</sup>		DNEL = 208mg/m <sup>3</sup>	$DNEL = 348.4 mg/m^3$
80-62-6 ( >95 )				

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

See values below.

	Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
			sediment		sewage treatment	
	Methyl methacrylate	PNEC = 0.94mg/L	PNEC = 10.2mg/kg	PNEC = 0.94mg/L	PNEC = 10mg/L	PNEC = 1.48 mg/kg
L	80-62-6 ( >95 )		sediment dw			soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Methyl methacrylate	PNEC = 0.094 mg/L	PNEC =			
80-62-6 (>95)		0.102mg/kg			
		sediment dw			

#### 8.2. Exposure controls

#### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

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Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

	Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
	Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
	Nitrile rubber	recommendations			
	Neoprene				
L	PVC				

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g., sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

When workers are facing concentrations above the exposure limit they must use **Respiratory Protection** 

appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

and maintained properly

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits Large scale/emergency use

are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to

EN14387

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls** Prevent product from entering drains.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical State** Liquid

Colorless **Appearance** Odor Strona

**Odor Threshold** No data available **Melting Point/Range** -48 °C / -54.4 °F **Softening Point** No data available **Boiling Point/Range** 100 °C / 212 °F Flammability (liquid) Highly flammable Flammability (solid,gas) Not applicable

**Explosion Limits** Lower 2.1

**Upper** 12.5 Flash Point 8 °C / 46.4 °F

430 °C / 806 °F **Autoignition Temperature Decomposition Temperature** No data available pН

No information available Viscosity 0.6 mPa s at 20 °C

@ 760 mmHg On basis of test data

Liquid

Method - No information available

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Water Solubility 15.9 g/L (20°C)

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Componentlog PowMethyl methacrylate1.38

Vapor Pressure 40 mbar @ 20 °C

Density / Specific Gravity 0.930

Bulk DensityNot applicableLiquidVapor Density3.5 (Air = 1.0)(Air = 1.0)

Particle characteristics (liquid) Not applicable

9.2. Other information

Molecular Formula C5 H8 O2 Molecular Weight 100.12

Explosive Properties Vapors may form explosive mixtures with air

Self-accelerating polymerisation >55°C (all packages)

temperature (SAPT) Heat of Polymerization (KJ/Mole) = 54.0

## **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

10.2. Chemical stability

Stable under normal conditions. Hazardous polymerization may occur upon depletion of

inhibitor.

Yes

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization may occur upon depletion of inhibitor.

**Hazardous Reactions** No information available.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Excess heat. Exposure

to light. Incompatible products.

10.5. Incompatible materials

Acids. Bases. Amines. Halogens. Peroxides. Reducing Agent.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO2).

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### **Product Information**

(a) acute toxicity;

OralBased on available data, the classification criteria are not metDermalBased on available data, the classification criteria are not metInhalationBased on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyl methacrylate	LD50 8420 - 10000 mg/kg (Rat	LD50 5000 - 7500 mg/kg (	LC50 = 29.8 mg/L (Rat) 4 h

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)	Rabbit )	

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

Respiratory Skin

Based on available data, the classification criteria are not met

Category 1

May cause sensitization by skin contact

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

Mutagenic effects have occurred in experimental animals

(f) carcinogenicity; Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Based on available data, the classification criteria are not met

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

(h) STOT-single exposure; Category 3

Respiratory system. Results / Target organs

(i) STOT-repeated exposure: Based on available data, the classification criteria are not met

**Target Organs** None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

delayed

Symptoms / effects, both acute and Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness,

tiredness, nausea and vomiting.

#### 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** Do not empty into drains. Harmful to aquatic organisms, may cause long-term adverse

> effects in the aquatic environment. The product contains following substances which are hazardous for the environment. Contains a substance which is:. Harmful to aquatic

organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae	
Methyl methacrylate	LC50: 326.4 - 426.9 mg/L, 96h	EC50: = 69 mg/L, 48h (Daphnia	EC50: = 170 mg/L, 96h	

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static (Describer	-tiul-t-)		(Decordations a significant agentate)
static (Poecilia r		magna)	(Pseudokirchneriella subcapitata)
LC50: > 79 mg/L,			
(Oncorhynchus	mykiss)		
LC50: > 79 mg	g/L, 96h		
flow-through (Onc	corhynchus		
mykiss)	)		
LC50: 153.9 - 341.	.8 mg/L, 96h		
static (Lepomis ma	acrochirus)		
LC50: 170 - 206	mg/L, 96h		
flow-through (L	epomis		
macrochir			
LC50: 125.5 - 190.	,		
static (Pimephales			
· · · · ·	' '		
LC50: 243 - 275			
flow-through (Pi	•		
promelas	s)		

12.2. Persistence and degradability Readily biodegradable

**Persistence** 

Persistence is unlikely.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Methyl methacrylate	1.38	No data available

12.4. Mobility in soil The product is water soluble, and may spread in water systems . Will likely be mobile in the

environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB

assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent

and very bioaccumulative (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

**Persistent Organic Pollutant Ozone Depletion Potential** 

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

## 13.1. Waste treatment methods

Waste from Residues/Unused

**Contaminated Packaging** 

**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.

Dispose of this container to hazardous or special waste collection point. Empty containers

retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and

empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)** According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

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Other Information Do not flush to sewer. Waste codes should be assigned by the user based on the

application for which the product was used. Can be landfilled or incinerated, when in

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compliance with local regulations.

## **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

**14.1. UN number** UN1247

14.2. UN proper shipping name METHYL METHACRYLATE MONOMER, STABILIZED

14.3. Transport hazard class(es) 3 14.4. Packing group II

ADR

**14.1. UN number** UN1247

14.2. UN proper shipping name METHYL METHACRYLATE MONOMER, STABILIZED

14.3. Transport hazard class(es) 3 14.4. Packing group II

IATA

**14.1. UN number** UN1247

14.2. UN proper shipping name METHYL METHACRYLATE MONOMER, STABILIZED

14.3. Transport hazard class(es) 3 14.4. Packing group II

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user Inhibitors have been added to stabilize this product. Inhibitor levels should be maintained.

Hazardous polymerization may occur upon depletion of inhibitor.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

## **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). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Methyl methacrylate	80-62-6	201-297-1	474-150-4	-	X	X	KE-25050	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Methyl methacrylate	80-62-6	Х	ACTIVE	X	-	X	X	Х

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

#### Authorisation/Restrictions according to EU REACH

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Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Methyl methacrylate	80-62-6	-	Use restricted. See item 75. (see link for restriction details)	-

#### **REACH links**

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

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Seveso III Directive (2012/18/EC)	
		Qualifying Quantities for Major Accident   Qualifying Quantities for Safety	
		Notification	Requirements
Methyl methacrylate	80-62-6	Not applicable	Not applicable

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

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

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

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

#### **National Regulations**

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

WGK Classification See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Methyl methacrylate	WGK1	

Component	France - INRS (Tables of occupational diseases)		
Methyl methacrylate	Tableaux des maladies professionnelles (TMP) - RG 65,RG 82		

#### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## **SECTION 16: OTHER INFORMATION**

## Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapor

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H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H335 - May cause respiratory irritation

#### Legend

**CAS** - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances

Substances List **ENCS** - Japanese Existing and New Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances IECSC - Chinese Inventory of Existing Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances

AICS - Australian Inventory of Chemical Substances NZIoC - New Zealand Inventory of Chemicals

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

WEL - Workplace Exposure Limit

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

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Shins

ATE - Acute Toxicity Estimate VOC - (Volatile Organic Compound)

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

## **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

**Creation Date** 13-Nov-2013 **Revision Date** 25-Sep-2023

**Revision Summary** SDS sections updated, 2, 3, 9, 14.

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

## **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

## **End of Safety Data Sheet**