

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

Creation Date 19-Oct-2009 Revision Date 22-Sep-2023 Revision Number 14

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

#### 1.1. Product identifier

Product Description: Phosphoric acid, 85+% solution in water

Cat No.: 201140000; 201140010; 201140025; 201140100; 201145000

Synonyms Orthophosphoric acid

 Index No
 015-011-00-6

 CAS No
 7664-38-2

 EC No
 231-633-2

 Molecular Formula
 H3 O4 P

Unique Formula Identifier (UFI) KQWY-02HJ-CX0G-23KJ

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

Recommended Use Laboratory chemicals.
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

Poison Centre - Emergency information services

Ireland: National Poisons Information Centre (NPIC) -

01 809 2166 (8am-10pm, 7 days a week)

Malta: +356 2395 2000 Cyprus: +357 2240 5611

## **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

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**Physical hazards** 

Substances/mixtures corrosive to metal Category 1 (H290)

**Health hazards** 

Acute oral toxicity

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Category 1 (H302)

Category 1 B (H314)

Category 1 (H318)

**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**

H290 - May be corrosive to metals

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

#### **Precautionary Statements**

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

#### 2.3. Other hazards

PBT:-

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

vPvB :-

This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

This product does not contain any known or suspected endocrine disruptors

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

#### 3.2. Mixtures

	Component	CAS No	EC No	Weight %	CLP Classification - According to
1					GB-CLP Regulations UK SI 2019/720 and

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				UK SI 2020/1567
Orthophosphoric acid	7664-38-2	EEC No. 231-633-2	>/= 85	Met. Corr. 1 (H290)
				Acute Tox. 4 (H302)
				Skin Corr. 1B (H314)
				Eye Dam. 1 (H318)
Water	7732-18-5	231-791-2	= 15</td <td>-</td>	-

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Orthophosphoric acid	Skin Corr. 1B :: C>=25% Eye Irrit. 2 :: 10%<=C<25% Skin Irrit. 2 :: 10%<=C<25%	-	-

Components	Reach Registration Number	
Orthophosphoric acid	01-2119485924-24	

Full text of Hazard Statements: see section 16

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

#### 4.1. Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

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

Immediate medical attention is required.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Remove and wash

contaminated clothing and gloves, including the inside, before re-use. Call a physician

immediately.

**Ingestion** Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an

unconscious person. Call a physician immediately.

**Inhalation** If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately.

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

Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

be investigated

## 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

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#### **Suitable Extinguishing Media**

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

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

None.

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

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

#### **Hazardous Combustion Products**

Oxides of phosphorus.

#### 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. Thermal decomposition can lead to release of irritating gases and vapors.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### 6.2. Environmental precautions

Should not be released into the environment.

#### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

#### 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

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

#### **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 containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Store under an inert atmosphere. Protect from moisture.

Technical Rules for Hazardous Substances (TRGS) 510 Class 8B Storage Class (LGK) (Germany)

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#### 7.3. Specific end use(s)

Use in laboratories

## **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
Orthophosphoric acid	STEL: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> (8h)	TWA: 1 mg/m <sup>3</sup> 8 hr.
i i	TWA: 1 mg/m <sup>3</sup>	STEL: 2 mg/m <sup>3</sup> (15min)	STEL: 2 mg/m <sup>3</sup> 15 min

#### **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

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Orthophosphoric acid 7664-38-2 ( >/= 85 )		DNEL = 134.5mg/kg bw/day		DNEL = 3.8mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Orthophosphoric acid 7664-38-2 ( >/= 85 )	DNEL = 1mg/m <sup>3</sup>	DNEL = 948.6mg/m <sup>3</sup>	DNEL = 1mg/m <sup>3</sup>	DNEL = 13.2mg/m <sup>3</sup>

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

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Orthophosphoric acid	PNEC = 100µg/L	PNEC = 392µg/kg	PNEC = 1000µg/L	PNEC = 100mg/L	$PNEC = 19.7 \mu g/kg$
7664-38-2 ( >/= 85 )	-	sediment dw		-	soil dw

	Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Ī	Orthophosphoric acid	PNEC = 10µg/L	PNEC = 39.2µg/kg		PNEC = 4mg/kg	
١	7664-38-2 ( >/= 85 )		sediment dw		food	

## 8.2. Exposure controls

#### **Engineering Measures**

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations

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and safety showers are close to the workstation location.

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

Personal protective equipment

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

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	> 480 minutes	0.36 mm	EN 374	As tested under EN374-3 Determination of
			Level 6	Resistance to Permeation by Chemicals
Nitrile rubber	> 480 minutes	0.1 mm		•
Neoprene	> 480 minutes	0.45 mm		
Viton (R)	> 480 minutes	0.7 mm		

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.

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

appropriate certified respirators.

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

and maintained properly

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

are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: Particulates filter conforming to EN 143 Acid gases filter Type

E Yellow 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

141

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

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water

system.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

Physical State Liquid

Appearance Clear, Viscous Odor Odorless

Odor ThresholdNo data availableMelting Point/Range21 °C / 69.8 °FSoftening PointNo data availableBoiling Point/Range158 °C / 316.4 °FFlammability (liquid)No data available

Flammability (solid,gas) Not applicable Liquid

Explosion Limits Not applicable

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Flash Point No information available Method - No information available

Autoignition Temperature No data available

Decomposition Temperature 300 °C

pH 300 °C < 2

Viscosity No data available

Water Solubility Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Vapor Pressure 2 hPa @ 20°C

Density / Specific Gravity 1.680

Bulk DensityNot applicableLiquidVapor Density3.4(Air = 1.0)

Particle characteristics Not applicable (liquid)

9.2. Other information

Molecular Formula H3 O4 P Molecular Weight 98.00

Explosive PropertiesNot applicableOxidizing PropertiesNot applicableEvaporation RateNot applicable

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

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat. Exposure to moisture. Exposure to moist air or water.

10.5. Incompatible materials

Strong oxidizing agents. Metals. Bases. Alcohols. Amines. halogenated agents.

10.6. Hazardous decomposition products

Oxides of phosphorus.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

**Product Information** 

(a) acute toxicity;

Oral Category 4

**Dermal**Based on available data, the classification criteria are not met
Inhalation
Based on available data, the classification criteria are not met

Toxicology data for the components

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Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Orthophosphoric acid	LD50 = 1530 mg/kg (Rat)	LD50 = 2740 mg/kg ( Rabbit )	850 mg/m³(Rat)1 h
Water	-	-	-

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

No data available Respiratory Skin No data available

No data available (e) germ cell mutagenicity;

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

No data available (g) reproductive toxicity;

No data available (h) STOT-single exposure:

No data available (i) STOT-repeated exposure;

**Target Organs** None known.

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

delayed

Symptoms / effects,both acute and Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is

contraindicated. Possible perforation of stomach or esophagus should be investigated.

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

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. **Ecotoxicity effects** 

Component	Freshwater Fish	Water Flea	Freshwater Algae
Orthophosphoric acid	98 - 106 mg/L LC50 96 h	> 100 mg/L EC50 = 48 h	

## 12.2. Persistence and degradability

Miscible with water, Persistence is unlikely, based on information available. **Persistence** 

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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

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

PBT:-. This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT), vPvB:-. This preparation contains no substance

considered to be very persistent nor very bioaccumulating (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

Persistent Organic Pollutan 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

**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.

**European Waste Catalogue (EWC)** 

According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

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. Do not flush to sewer. Large amounts will affect pH and harm aquatic organisms. Solutions with low pH-value must be neutralized before

discharge.

## **SECTION 14: TRANSPORT INFORMATION**

IMDG/IMO

14.1. UN number

UN1805

14.2. UN proper shipping name

PHOSPHORIC ACID SOLUTION

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

8 III

<u>ADR</u>

14.1. UN number

UN1805

14.2. UN proper shipping name

PHOSPHORIC ACID, SOLUTION

14.3. Transport hazard class(es)

FIIOSFII

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14.4. Packing group

<u>IATA</u>

14.1. UN number UN1805

14.2. UN proper shipping name PHOSPHORIC ACID, SOLUTION

14.3. Transport hazard class(es) 14.4. Packing group Ш

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required.

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
Orthophosphoric acid	7664-38-2	231-633-2	ı	-	X	X	KE-27427	X	X
Water	7732-18-5	231-791-2	-	-	X	X	KE-35400	X	-

	Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
ſ	Orthophosphoric acid	7664-38-2	Х	ACTIVE	Х	-	Х	Х	Х
Γ	Water	7732-18-5	Х	ACTIVE	Х	-	Х	Х	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

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)
Orthophosphoric acid	7664-38-2	-	Use restricted. See item 75. (see link for restriction details)	-
Water	7732-18-5	-	-	-

#### **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 Report	
		Notification	Requirements	
Orthophosphoric acid	7664-38-2	Not applicable	Not applicable	
Water	7732-18-5	Not applicable	Not applicable	

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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** 

Water endangering class = 1 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Orthophosphoric acid	WGK1	

	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	
Orthophosphoric acid Prohibited and Restricted		Prohibited and Restricted			
	7664-38-2 ( >/= 85 )	Substances			

#### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

## **SECTION 16: OTHER INFORMATION**

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

H290 - May be corrosive to metals

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

#### 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

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances AICS - Australian Inventory of Chemical Substances

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

NZIoC - New Zealand Inventory of Chemicals

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re Limit TWA - Time Weighted Average

LD50 - Lethal Dose 50%

**Transport Association** 

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

IARC - International Agency for Research on Cancer

ICAO/IATA - International Civil Aviation Organization/International Air

MARPOL - International Convention for the Prevention of Pollution from

Predicted No Effect Concentration (PNEC)

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

EC50 - Effective Concentration 50%

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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

**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

Key literature references and sources for data

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

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

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Ships

Physical hazards On basis of test data

Health Hazards Bridging principle "Dilution" Calculation method
Environmental hazards Bridging principle "Dilution" Calculation method

**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.

Chemical incident response training.

Creation Date19-Oct-2009Revision Date22-Sep-2023

**Revision Summary** SDS sections updated.

# 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**

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