

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

Creation Date 22-Sep-2009 Revision Date 07-Feb-2024 Revision Number 5

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

## 1.1. Product identifier

Product Description: Bisphenol A
Cat No.: A10324

**Synonyms** 2,2-Bis-4-hydroxyphenylpropane; 4,4'-(1-Methylethylidene)bisphenol;

4-[2-(4-Hydroxyphenyl)propan-2-yl]phenol; Bisphenol A

 Index No
 604-030-00-0

 CAS No
 80-05-7

 EC No
 201-245-8

 Molecular Formula
 C15 H16 O2

REACH registration number -

#### 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 .

Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific)

Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom

Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608

**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

ALFAAA10324

Bisphenol A Revision Date 07-Feb-2024

#### **Physical hazards**

Based on available data, the classification criteria are not met

#### **Health hazards**

Serious Eye Damage/Eye Irritation

Skin Sensitization

Reproductive Toxicity

Specific target organ toxicity - (single exposure)

Category 1 (H318)

Category 1 (H317)

Category 1 (H360F)

Category 3 (H335)

#### **Environmental hazards**

Acute aquatic toxicity

Chronic aquatic toxicity

Category 1 (H400)

Category 1 (H410)

Full text of Hazard Statements: see section 16





Signal Word

**Danger** 

## **Hazard Statements**

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H360F - May damage fertility

H410 - Very toxic to aquatic life with long lasting effects

### **Precautionary Statements**

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

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

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

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

## Additional EU labelling

Restricted to professional users

#### 2.3. Other hazards

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

Contains a known or suspected endocrine disruptor

Contains a substance on the National Authorities Endocrine Disruptor Lists

Toxic to terrestrial vertebrates

## **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
4,4'-Isopropylidenediphenol	80-05-7	EEC No. 201-245-8	<=100	Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT SE 3 (H335) Repr. 1B (H360F) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
4,4'-Isopropylidenediphenol	=	1 (acute) 10 (chronic)	-
		TO (Chronic)	

Full text of Hazard Statements: see section 16

## **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.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

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

symptoms occur.

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 severe eye damage. May cause allergic skin reaction. 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

#### 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 spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

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

No information available.

Revision Date 07-Feb-2024

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

Do not allow run-off from fire-fighting to enter drains or water courses.

#### **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

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

#### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

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

Sweep up and shovel into suitable containers for disposal. 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

Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid dust formation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing.

#### **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. Corrosives area.

Technical Rules for Hazardous Substances (TRGS) 510 Class 6.1C Storage Class (LGK) (Germany)

#### 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
4,4'-Isopropylidenediphenol	STEL: 6 mg/m <sup>3</sup> 15 min	TWA: 2 mg/m <sup>3</sup> (8h)	TWA: 2 mg/m <sup>3</sup> 8 hr.
	TWA: 2 mg/m <sup>3</sup> 8 hr		inhalable fraction
			STEL: 6 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)

Workers; See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
4,4'-Isopropylidenediphenol		DNEL = 0.031 mg/kg		DNEL = 0.031 mg/kg
80-05-7 ( <=100 )		bw/day		bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
4,4'-Isopropylidenediphenol 80-05-7 ( <=100 )	DNEL = 2mg/m <sup>3</sup>	DNEL = 2mg/m <sup>3</sup>	DNEL = 2mg/m <sup>3</sup>	DNEL = 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	
4,4'-Isopropylidenedipheno	PNEC = 0.018mg/L	PNEC = 1.2mg/kg	PNEC = 0.011mg/L	PNEC = 320mg/L	PNEC = 3.7mg/kg
1	-	sediment dw			soil dw
80-05-7 ( <=100 )					

Component	Marine water	Marine water	Marine water	Food chain	Air
		sediment	intermittent		
4,4'-Isopropylidenedipheno	PNEC = 0.018mg/L	PNEC = 0.24mg/kg			
1		sediment dw			
80-05-7 ( <=100 )					

#### 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.

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

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

Hand Protection Protective gloves

Bisphenol A Revision Date 07-Feb-2024

l PVC
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**Skin and body protection** Long sleeved clothing.

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

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:-** Particle filtering: EN149:2001 When RPE is used a face piece Fit Test should be conducted

system. Local authorities should be advised if significant spillages cannot be contained.

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

## 9.1. Information on basic physical and chemical properties

Physical State Solid

Appearance White Odor aromatic

Odor Threshold No data available

Melting Point/Range 155 - 158 °C / 311 - 316.4 °F

Softening Point

No data available

Boiling Point/Range220 °C / 428 °F@ 4 mmHgFlammability (liquid)Not applicableSolid

Flammability (solid,gas) No information available

Explosion Limits Lower 30 Vol%

Flash Point 227 °C / 440.6 °F Method - No information available

**Autoignition Temperature** 510 °C / 950 °F

**Decomposition Temperature** > 260°C

**pH** No information available

Viscosity Not applicable Solid

Water Solubility practically insoluble Solubility in other solvents Proceedings of the Procedure of th

Partition Coefficient (n-octanol/water)

**Component log Pow** 4,4'-Isopropylidenediphenol 3.4

Vapor Pressure 0.86 mbar @ 190 °C

**Density / Specific Gravity** 

Bulk Density No data available

Vapor DensityNot applicableSolid

Particle characteristics No data available

9.2. Other information

Molecular FormulaC15 H16 O2Molecular Weight228.29

Evaporation Rate Not applicable - Solid

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

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

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.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Acid anhydrides. Acid chlorides.

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;

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

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
4,4'-Isopropylidenediphenol	LD50 = 3300 mg/kg (Rat)	LD50 = 3000 mg/kg ( Rabbit )	LC50 > 170 mg/m <sup>3</sup> (Rat) 6 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory No data available Skin Category 1

No information available

(e) germ cell mutagenicity; No data available

Not mutagenic in AMES Test

Bisphenol A Revision Date 07-Feb-2024

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Category 1B **Reproductive Effects** May impair fertility.

(h) STOT-single exposure; Category 3

Results / Target organs Respiratory system.

No data available (i) STOT-repeated exposure;

**Target Organs** None known.

(j) aspiration hazard; Not applicable

Solid

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.

#### 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health

Contains a substance on the National Authorities Endocrine Disruptor Lists

Component	EU National Authorities Endocrine Disruptor Lists - Health
4,4'-Isopropylidenediphenol 80-05-7 ( <=100 )	List I

## **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity **Ecotoxicity effects** 

The product contains following substances which are hazardous for the environment. Very

toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

L	Component	Freshwater Fish	Water Flea	Freshwater Algae
Г	4,4'-Isopropylidenediphenol	LC50: 4.0 - 5.5 mg/L, 96h static	EC50: 9.2 - 11.4 mg/L, 48h	EC50: = 2.5 mg/L, 96h
		(Pimephales promelas)	Static (Daphnia magna)	(Pseudokirchneriella subcapitata)
		LC50: = 4 mg/L, 96h	EC50: = 3.9 mg/L, 48h (Daphnia	
		(Oncorhynchus mykiss)	magna)	
		LC50: 3.6 - 5.4 mg/L, 96h	EC50: = 10.2 mg/L, 48h	
		flow-through (Pimephales promelas)	(Daphnia magna)	
		LC50: = 9.9 mg/L, 96h static		
		(Brachydanio rerio)		
L				

Component	Microtox	M-Factor
4,4'-Isopropylidenediphenol		1 (acute)
		10 (chronic)

12.2. Persistence and degradability Expected to be 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)
4,4'-Isopropylidenediphenol	3.4	5.1 - 13.8 dimensionless

12.4. Mobility in soil Spillage unlikely to penetrate soil . Is not likely mobile in the environment due its low water

solubility.

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** 

Assess endocrine disrupting properties for the environment

Contains a substance on the National Authorities Endocrine Disruptor Lists.

Component	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances
4,4'-Isopropylidenediphenol	Group I Chemical	High Exposure Concern

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

**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. Should not

be released into the environment.

**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 Do not flush to sewer. 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 let this

chemical enter the environment.

## **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

<u>14.1. UN number</u> UN3077

**14.2. UN proper shipping name** Environmentally hazardous substances, solid, n.o.s.

**Technical Shipping Name** 4,4'-Isopropylidenediphenol

14.3. Transport hazard class(es)914.4. Packing groupIII

ADR

**14.1. UN number** UN3077

Bisphenol A Revision Date 07-Feb-2024

**14.2. UN proper shipping name** Environmentally hazardous substances, solid, n.o.s.

**Technical Shipping Name** 4,4'-Isopropylidenediphenol

**14.3. Transport hazard class(es)** 9 **14.4. Packing group** III

**IATA** 

**14.1. UN number** UN3077

**14.2. UN proper shipping name** Environmentally hazardous substances, solid, n.o.s.

**Technical Shipping Name** 4,4'-Isopropylidenediphenol

14.3. Transport hazard class(es) 9 14.4. Packing group III

**14.5. Environmental hazards** Dangerous for the environment

Product is a marine pollutant according to the criteria set by IMDG/IMO

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
4,4'-Isopropylidenediphenol	80-05-7	201-245-8	-	1	X	X	KE-23982	Χ	Χ

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
4,4'-Isopropylidenediphenol	80-05-7	X	ACTIVE	X	-	X	X	X

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	Candidate List of Substances of Very High
				Concern (SVHC)
4,4'-Isopropylidenediphenol	80-05-7	-	Use restricted. See item	SVHC Candidate list -
			30.	(Toxic to reproduction,
			(see link for restriction	Article 57c)
			details)	
			Use restricted. See item	
			66.	
			(see link for restriction	
			details)	
			Use restricted. See item	
			75.	
			(see link for restriction	
			details)	

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

Bisphenol A Revision Date 07-Feb-2024

https://echa.europa.eu/authorisation-list

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

https://echa.europa.eu/candidate-list-table

## 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
4,4'-Isopropylidenediphenol	80-05-7	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

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

#### **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
4,4'-Isopropylidenediphenol	WGK3	

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
4,4'-Isopropylidenediphenol 80-05-7 ( <=100 )	Prohibited and Restricted Substances		

## 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

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H360F - May damage fertility

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

**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

PICCS - Philippines Inventory of Chemicals and Chemical Substances IECSC - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

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

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)

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 hvaiene.

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

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

Chemical incident response training.

**Prepared By** Health, Safety and Environmental Department

22-Sep-2009 **Creation Date Revision Date** 07-Feb-2024

**Revision Summary** New emergency telephone response service provider.

## 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**