

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

Creation Date 19-Jun-2012 Revision Date 20-Oct-2023 Revision Number 9

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

1.1. Product identifier

Product Description: <u>Aqualine™ Complete 1</u>

Cat No. : K/1900/15

Synonyms Karl Fischer Reagent

Molecular Formula Solution

Unique Formula Identifier (UFI) UVJS-4371-MX0E-YQET

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 nameThermo Fisher Scientific
Janssen Pharmaceuticalaan 3a

2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

Tel: 01509 231166

Chemtrec US: (800) 424-9300 Chemtrec EU: 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

Physical hazards

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Based on available data, the classification criteria are not met

Health hazards

Skin Corrosion/Irritation
Serious Eye Damage/Eye Irritation
Reproductive Toxicity
Specific target organ toxicity - (repeated exposure)

Category 2 (H315) Category 2 (H319) Category 1B (H360D) Category 2 (H373)

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

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H360D - May damage the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

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

P332 + P313 - If skin irritation occurs: Get medical advice/attention

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

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

P308 + P313 - IF exposed or concerned: Get medical advice/attention

Additional EU labelling

Restricted to professional users

2.3. Other hazards

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 GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
lodine	7553-56-2	231-442-4	2 - 5	Acute Tox. 4 (H302)

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				Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) STOT RE 1 (H372) Aquatic Acute 1 (H400)
[(Imidazol-1-yl)sulfonyl]oxyethoxydiglycol	NA		2.5 - 10	-
1-Imidazole	288-32-4	EEC No. 206-019-2	1 - 2.5	Skin Corr. 1C (H314) Eye Dam. 1 (H318) Repr. 1B (H360D) Acute Tox. 4 (H302)
Diethylene glycol monoethyl ether	111-90-0	EEC No. 203-919-7	75 - 95	-

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Iodine	-	1	-

Components	Reach Registration Number	
lodine	01-2119485285-30	
1-Imidazole	01-2119485825-24	
Diethylene glycol monoethyl ether	01-2119475105-42	

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. In

the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. 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.

Immediate medical attention is required.

Self-Protection of the First Aider Use personal protective equipment as required.

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

None reasonably foreseeable. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

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

Notes to Physician Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

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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.

5.2. Special hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon monoxide (CO), Sulfur oxides, Nitrogen oxides (NOx), 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. 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

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

6.2. 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

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

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. 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.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

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): **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
lodine	STEL: 0.1 ppm 15 min		TWA: 0.01 ppm 8 hr.
	STEL: 1.1 mg/m ³ 15 min		inhalable fraction and vapour
			TWA: 0.01 mg/m ³ 8 hr.
			STEL: 0.1 ppm 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)
lodine				DNEL = 0.01mg/kg
7553-56-2 (2 - 5)				bw/day
1-Imidazole				DNEL = 1.5mg/kg
288-32-4 (1 - 2.5)				bw/day
Diethylene glycol monoethyl				DNEL = 83mg/kg
ether				bw/day
111-90-0 (75 - 95)				

Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
	(Inhalation)	systemic (Inhalation)	(Inhalation)	systemic (Inhalation)
lodine				$DNEL = 0.07 mg/m^3$
7553-56-2 (2 - 5)				-
1-Imidazole				$DNEL = 10.6 mg/m^3$
288-32-4 (1 - 2.5)				-
Diethylene glycol monoethyl			DNEL = 30mg/m ³	DNEL = 61mg/m ³
ether				
111-90-0 (75 - 95)				

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Iodine	PNEC = 18.13µg/L	PNEC = 3.99mg/kg		PNEC = 11mg/L	PNEC = 5.95mg/kg
7553-56-2 (2 - 5)	-	sediment dw		-	soil dw
1-Imidazole	PNEC = 0.13mg/L	PNEC =	PNEC = 1.3mg/L	PNEC = 10mg/L	PNEC =
288-32-4 (1 - 2.5)	_	0.336mg/kg	,	-	0.0425mg/kg soil

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		sediment dw			dw
Diethylene glycol	PNEC = 1.98mg/L	PNEC = 7.32mg/kg	PNEC = 19.8mg/L	PNEC = 500mg/L	PNEC = 0.34mg/kg
monoethyl ether		sediment dw			soil dw
111-90-0 (75 - 95)					

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
lodine	PNEC = 60.01µg/L	PNEC =			
7553-56-2 (2 - 5)		20.22mg/kg			
, ,		sediment dw			
1-Imidazole	PNEC = 0.013mg/L	PNEC =			
288-32-4 (1 - 2.5)		0.0336mg/kg			
		sediment dw			
Diethylene glycol	PNEC = 0.198mg/L	PNEC =		PNEC = 444mg/kg	
monoethyl ether		0.732mg/kg		food	
111-90-0 (75 - 95)		sediment dw			

8.2. Exposure controls

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Use only under a chemical fume hood. 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
١	Viton (R)	See manufacturers	-	EN 374	(minimum requirement)
-		recommendations			

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.

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

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: low boiling organic solvent Type AX Brown conforming to EN371 or Organic gases and vapours filter Type A Brown conforming to EN14387

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

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

No information available.

Environmental exposure controls

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance Brown
Odor Alcohol-like
Odor Threshold No data available
Melting Point/Range No data available
Softening Point No data available
Boiling Point/Range No information available
Flammability (liquid) No data available

Flammability (solid,gas) Not applicable Liquid

Explosion Limits No data available

Flash Point No information available Method - No information available

Autoignition TemperatureNo data availableDecomposition TemperatureNo data availablepHNo information availableViscosityNo data available

Water Solubility Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Componentlog Powlodine2.491-Imidazole-0.02Diethylene glycol monoethyl ether-0.8

Vapor Pressure No data available

Density / Specific Gravity 1.06

Bulk DensityNot applicableLiquidVapor DensityNo data available(Air = 1.0)

Particle characteristics Not applicable (liquid)

9.2. Other information

Molecular Formula Solution

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 ReactionsNone under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

Strong oxidizing agents. Reducing Agent. Strong acids. Bases. Acid anhydrides. Acid

chlorides. Metals.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Sulfur oxides. Nitrogen oxides (NOx). Carbon dioxide (CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product InformationNo acute toxicity information is available for this product

(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

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iodine	315 mg/kg (Rat)	1425 mg/kg (Rabbit)	4.588 mg/L 4h (Rat)
1-Imidazole	970 mg/kg (Rat)	-	-
Diethylene glycol monoethyl ether	6031 mg/kg (Rat)	9143 mg/kg (Rabbit)	LC50 > 5240 mg/m ³ (Rat) 4 h
		4200 μL/kg (Rabbit) 6 mL/kg (Rat)	

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

Component	Test method	Test species	Study result
Iodine	OECD Test Guideline 429	mouse	non-sensitising
7553-56-2 (2 - 5)	Local Lymph Node Assay		_

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Category 1B

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

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 2

Target Organs Thyroid.

(j) aspiration hazard; No data available

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Other Adverse Effects

The toxicological properties have not been fully investigated.

Symptoms / effects,both acute and Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. delayed

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. .

Component	Freshwater Fish	Water Flea	Freshwater Algae
Iodine	LC50 = 1.67 mg/L 96h	EC50 = 0.55 mg/L 48h	EC50 = 0.13 mg/L 72h
1-Imidazole		EC50: = 341.5 mg/L, 48h (Daphnia magna)	EC50: = 82 mg/L, 96h (Desmodesmus subspicatus) EC50: = 130 mg/L, 72h (Desmodesmus subspicatus)
Diethylene glycol monoethyl ether	LC50: 11600 - 16700 mg/L, 96h flow-through (Pimephales promelas) LC50: 11400 - 15700 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 19100 - 23900 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 10000 mg/L, 96h static (Lepomis macrochirus)	EC50: 3940 - 4670 mg/L, 48h (Daphnia magna)	

Component	Microtox	M-Factor
lodine	EC50 = 280 mg/L 3h	1
1-Imidazole	= 1200 mg/L EC50 Pseudomonas putida 17 h	
	= 231 mg/L EC50 Photobacterium phosphoreum 30 min	

12.2. Persistence and degradability

Persistence Persistence is unlikely.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
lodine	2.49	No data available
1-Imidazole	-0.02	No data available
Diethylene glycol monoethyl ether	-0.8	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

No data available for assessment.

12.6. Endocrine disrupting

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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 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.

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.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

ADR Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

<u>IATA</u> Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

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
lodine	7553-56-2	231-442-4	1	-	X	X	KE-21023	Χ	-
[(Imidazol-1-yl)sulfonyl]oxyethoxyd iglycol	NA	-	-	-	-	-	-	-	-
1-Imidazole	288-32-4	206-019-2	-	-	X	Χ	KE-20937	Χ	X
Diethylene glycol monoethyl ether	111-90-0	203-919-7	-	-	X	X	KE-10467	Χ	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Iodine	7553-56-2	X	ACTIVE	Х	Ī	Х	X	Х
[(Imidazol-1-yl)sulfonyl]oxyethoxyd iglycol	NA	-	-	-	-	-	-	-
1-Imidazole	288-32-4	Х	ACTIVE	Х	-	Х	Х	Χ
Diethylene glycol monoethyl ether	111-90-0	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)
lodine	7553-56-2	-	Use restricted. See item 75. (see link for restriction details)	-
[(Imidazol-1-yl)sulfonyl]oxyethoxydig lycol	NA	-	-	-
1-Imidazole	288-32-4	-	Use restricted. See item 30. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	<u>-</u>
Diethylene glycol monoethyl ether	111-90-0	-	-	-

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) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
lodine	7553-56-2	Not applicable	Not applicable
[(Imidazol-1-yl)sulfonyl]oxyet hoxydiglycol	NA	Not applicable	Not applicable
1-Imidazole	288-32-4	Not applicable	Not applicable
Diethylene glycol monoethyl ether	111-90-0	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

Not applicable

import of dangerous chemicals

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 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

Water endangering class = 1 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
lodine	WGK2	
1-Imidazole	WGK2	
Diethylene glycol monoethyl ether	WGK1	

Component	France - INRS (Tables of occupational diseases)
Diethylene glycol monoethyl ether	Tableaux des maladies professionnelles (TMP) - RG 84
ethei	

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
lodine 7553-56-2 (2 - 5)	Prohibited and Restricted Substances		

15.2. Chemical safety assessment

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

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H360D - May damage the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

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H372 - Causes damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

Legend

CAS - Chemical Abstracts Service

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

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical 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

VOC - (Volatile Organic Compound)

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

Key literature references and sources for data

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

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

Physical hazards On basis of test data **Health Hazards** Calculation method Calculation method **Environmental hazards**

Training Advice

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

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

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.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Creation Date 19-Jun-2012 20-Oct-2023 **Revision Date Revision Summary** Not applicable.

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