

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

Creation Date 25-Oct-2010 Revision Date 09-Feb-2024 Revision Number 9

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

1.1. Product identifier

Product Description: Ninhydrin, ozone friendly ready to use spray for TLC

Cat No. : 327020000; 327022400

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

Flammable aerosols Category 1 (H222) (H229)

Health hazards

ACR32702

Ninhydrin, ozone friendly ready to use spray for TLC

Revision Date 09-Feb-2024

Acute oral toxicity
Skin Corrosion/Irritation
Serious Eye Damage/Eye Irritation
Germ Cell Mutagenicity
Carcinogenicity
Specific target organ toxicity - (single exposure)

Category 4 (H302) Category 2 (H315) Category 1 (H318) Category 1B (H340) Category 1B (H350) Category 3 (H335) (H336)

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

H222 - Extremely flammable aerosol

H229 - Pressurised container: May burst if heated.

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H340 - May cause genetic defects

H350 - May cause cancer

Precautionary Statements

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

P251 - Pressurized container: Do not pierce or burn, even after use

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

P501 - Dispose of contents/ container to an approved waste disposal plant

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

Additional EU labelling

Restricted to professional users

2.3. Other hazards

Toxic to terrestrial vertebrates

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

Revision Date 09-Feb-2024

Ninhydrin, ozone friendly ready to use spray for TLC

				UK SI 2020/1567
L.P.G. (liquified petroleum gas)	68476-85-7	EEC No. 270-704-2	25-50	Flam. Gas 1 (H220) Muta. 1B (H340) Carc. 1B (H350) Press. Gas (H280)
n-Butyl alcohol	71-36-3	EEC No. 200-751-6	50-75	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 3 (H335) STOT SE 3 (H336)
1H-Indene-1,3(2H)-dione, 2,2-dihydroxy-	485-47-2	EEC No. 207-618-1	0.5	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)

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 ContactWash 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.

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

symptoms occur.

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

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

Causes eye burns. Causes severe eye damage. 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

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

Water may be ineffective. Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Extremely flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to

Ninhydrin, ozone friendly ready to use spray for TLC

Revision Date 09-Feb-2024

source of ignition and flash back.

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

Use personal protective equipment as required. Ensure adequate ventilation.

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

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

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. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510 Class 2B 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

Revision Date 09-Feb-2024

Ninhydrin, ozone friendly ready to use spray for TLC

Component **European Union** Ireland The United Kingdom L.P.G. (liquified petroleum gas) STEL: 1250 ppm 15 min STEL: 2180 mg/m³ 15 min TWA: 1000 ppm 8 hr TWA: 1750 mg/m³ 8 hr Carc. containing >0.1% Buta-1,3-diene n-Butyl alcohol 50ppm STEL; 154mg/m³ TWA: 20 ppm 8 hr. STEL STEL: 60 ppm 15 min

Biological limit values

List source(s):

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)
L.P.G. (liquified petroleum gas)				DNEL = 23.4 mg/kg
68476-85-7 (25-50)				bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
L.P.G. (liquified petroleum gas) 68476-85-7 (25-50)				$DMEL = 2.21 mg/m^3$
n-Butyl alcohol 71-36-3 (50-75)			DNEL = 310mg/m ³	

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
n-Butyl alcohol 71-36-3 (50-75)	PNEC = 0.082mg/L	PNEC = 0.324mg/kg sediment dw	PNEC = 2.25mg/L	PNEC = 2476mg/L	PNEC = 0.0166mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
n-Butyl alcohol	PNEC =	PNEC =			
71-36-3 (50-75)	0.0082mg/L	0.0324mg/kg			
, ,		sediment dw			

8.2. Exposure controls

Engineering Measures

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

Personal protective equipment

control hazardous materials at source

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	See manufacturers	-		(minimum requirement)

Ninhydrin, ozone friendly ready to use spray for TLC

Viton (R) recommendations EN 374

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

Revision Date 09-Feb-2024

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: 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

@ 760 mmHg

Liquid

141

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

Environmental exposure controls No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State Aerosol

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

Flammability (solid,gas) Not applicable

Explosion Limits No data available

Flash Point Not applicable Method - No information available

Autoignition Temperature 340 °C / 644 °F Decomposition Temperature No data available

pHViscosityNo information availableNo data available

Water Solubility Immiscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component log Pow
L.P.G. (liquified petroleum gas) 2.8
n-Butyl alcohol 1

Vapor Pressure No information available

Density / Specific Gravity No data available

Bulk DensityNot applicableLiquidVapor DensityNo information available(Air = 1.0)

Particle characteristics No data available

Ninhydrin, ozone friendly ready to use spray for TLC

Revision Date 09-Feb-2024

9.2. Other information

Explosive Properties explosive air/vapour mixtures possible

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. Excess heat. Keep away from open flames, hot surfaces and

sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

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 Category 4

DermalBased 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	
n-Butyl alcohol	LD50 = 700 mg/kg (Rat)	LD50 = 3402 mg/kg (Rabbit)	LC50 > 8000 ppm (Rat) 4 h	

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

(e) germ cell mutagenicity; Category 1B

(f) carcinogenicity; Category 1B

The table below indicates whether each agency has listed any ingredient as a carcinogen

Ninhydrin, ozone friendly ready to use spray for TLC

Revision Date 09-Feb-2024

Component	EU	UK	Germany	IARC
L.P.G. (liquified petroleum gas)	Carc Cat. 1A			

No data available (g) reproductive toxicity;

Category 3 (h) STOT-single exposure;

Results / Target organs Respiratory system, Central nervous system (CNS).

(i) STOT-repeated exposure; No data available

Target Organs No information available.

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

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
n-Butyl alcohol	LC50: 1376 mg/L, 96h	EC50: 1328 mg/L, 48h (Daphnia	EC50: 225 mg/L, 96h
	(Pimephales promelas) OECD	magna) OECD Guideline 202	(Pseudokirchneriella subcapitata)
	Guideline 203: 100000 -	EC50: 1897 - 2072 mg/L, 48h	OECD Guideline 201
	500000 μg/L, 96h static (Lepomis	Static (Daphnia magna)	EC50: > 500 mg/L, 72h
	macrochirus)	EC50: = 1983 mg/L, 48h	(Desmodesmus subspicatus)
	LC50: = 1740 mg/L, 96h	(Daphnia magna)	EC50: > 500 mg/L, 96h
	flow-through (Pimephales		(Desmodesmus subspicatus)
	promelas)		
	LC50: = 1910000 µg/L, 96h static		
	(Pimephales promelas)		
	LC50: 1730 - 1910 mg/L, 96h		
	static (Pimephales promelas)		

Component	Microtox	M-Factor
n-Butyl alcohol	EC50 = 2041.4 mg/L 5 min	
	EC50 = 2186 mg/L 30 min	
	EC50 = 3980 mg/L 24 h	
	EC50 = 4400 mg/L 17 h	

12.2. Persistence and degradability

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

Component	Degradability
n-Butyl alcohol	70 %
71-36-3 (50-75)	

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
L.P.G. (liquified petroleum gas)	2.8	No data available

Ninhydrin, ozone friendly ready to use spray for TLC

Revision Date 09-Feb-2024

n-Butyl alcohol 1 0.64 dimensionless

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

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

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. 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.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with

local regulations. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number UN1950 AEROSOLS

14.3. Transport hazard class(es)

14.4. Packing group

2.1

ADR

14.1. UN number UN1950 **14.2. UN proper shipping name** Aerosols

14.3. Transport hazard class(es)

2.1

14.4. Packing group

<u>IATA</u>

14.1. UN number UN1950

14.2. UN proper shipping name AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es) 2.1

Revision Date 09-Feb-2024

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
L.P.G. (liquified petroleum gas)	68476-85-7	270-704-2	ı	-	X	X	KE-28191	X	-
n-Butyl alcohol	71-36-3	200-751-6	-	-	Х	X	KE-03867	X	X
1H-Indene-1,3(2H)-dione,	485-47-2	207-618-1	-	-	Х	X	KE-10839	X	Х
2,2-dihydroxy-									1

Component	CAS No	TSCA	TSCA Inventory notification -	DSL	NDSL	AICS	NZIoC	PICCS
			Active-Inactive					
L.P.G. (liquified petroleum gas)	68476-85-7	X	ACTIVE	X	ı	X	Х	Х
n-Butyl alcohol	71-36-3	X	ACTIVE	X	ı	X	Χ	Х
1H-Indene-1,3(2H)-dione,	485-47-2	X	ACTIVE	Х	-	X	Х	Х
2,2-dihydroxy-								

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)
L.P.G. (liquified petroleum gas)	68476-85-7	-	Use restricted. See item 28. (see link for restriction details) Use restricted. See item 29. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-
n-Butyl alcohol	71-36-3	-	Use restricted. See item 75. (see link for restriction details)	-
1H-Indene-1,3(2H)-dione, 2,2-dihydroxy-	485-47-2	-	-	-

REACH links

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

Seveso III Directive (2012/18/EC)

Revision Date 09-Feb-2024

Ninhydrin, ozone friendly ready to use spray for TLC

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
L.P.G. (liquified petroleum gas)	68476-85-7	50 tonne	200 tonne
n-Butyl alcohol	71-36-3	Not applicable	Not applicable
1H-Indene-1,3(2H)-dione, 2,2-dihydroxy-	485-47-2	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 Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

National Regulations

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

WGK Classification Water endangering class = 3 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class		
n-Butyl alcohol	WGK1			

Component	France - INRS (Tables of occupational diseases)
n-Butyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84
1H-Indene-1,3(2H)-dione, 2,2-dihydroxy-	Tableaux des maladies professionnelles (TMP) - RG 66

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
n-Butyl alcohol 71-36-3 (50-75)		Group I	

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

H220 - Extremely flammable gas

H222 - Extremely flammable aerosol

H226 - Flammable liquid and vapor

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H340 - May cause genetic defects

H350 - May cause cancer

H319 - Causes serious eve irritation

Legend

CAS - Chemical Abstracts Service

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

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

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

Ships 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

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: Physical hazards On basis of test data **Health Hazards** Calculation method

Environmental hazards 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.

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

Creation Date 25-Oct-2010 09-Feb-2024 **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