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Version 1

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

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

**Product Identifier** 

Perihalan Produk: <u>Trichrome Stain Set</u> Product Description: <u>Trichrome Stain Set</u>

Cat No.: R40217

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company Thermo Scientific Microbiology Sdn Bhd

No.6, Jalan TTC 6, Taman Teknologi Cheng,

Cheng, 75250 Melaka, Malaysia

+606 334 0975 .

**Supplier** Remel

12076 Santa Fe Drive Lenexa, KS 66215 United States

KS 66215 United States Telephone: 1-800-255-6730

Fax:1-800-621-8251

E-mail address mbd-sds@thermofisher.com

**Emergency Telephone Number** 

(603) 5122 8888

CHEMTREC Malaysia 1-800-815-308 (Malay)

CHEMTREC Malaysia (Kuala Lumpur) +(60)-327884561 (Malay)

## **SECTION 2: HAZARDS IDENTIFICATION**

#### Classification of the substance or mixture

Flammable liquids	Category 2 (H225)
Aspiration Toxicity	Category 1 (H304)
Acute oral toxicity	Category 4 (H302)
Acute Inhalation Toxicity - Vapors	Category 3 (H331)
Skin Corrosion/Irritation	Category 2 (H315)
Serious Eye Damage/Eye Irritation	Category 2 (H319)
Skin Sensitization	Category 1 (H317)
Specific target organ toxicity - (single exposure)	Category 1 (H370)
Acute aquatic toxicity	Category 1 (H400)
Chronic aquatic toxicity	Category 1 (H410)

#### **Label Elements**

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#### Signal Word

#### Danger

#### **Hazard Statements**

H225 - Highly flammable liquid and vapor

H302 - Harmful if swallowed

H304 - May be fatal if swallowed and enters airways

H331 - Toxic if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H317 - May cause an allergic skin reaction

H370 - Causes damage to organs

H410 - Very toxic to aquatic life with long lasting effects

#### **Precautionary Statements**

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P331 - Do NOT induce vomiting

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

P311 - Call a POISON CENTER or doctor/physician

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

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

P362 - Take off contaminated clothing and wash before reuse

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

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

## Other Hazards

Toxicity to Soil Dwelling Organisms

This product does not contain any known or suspected endocrine disruptors

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

Component	CAS No	Weight %
Acetic acid	64-19-7	1.5
C.I. Acid Green 5	5141-20-8	<1.0
Fast green fcf	2353-45-9	<1.0
Phosphotungstic acid	12067-99-1	<1.0
lodine	7553-56-2	4
Butylated hydroxyanisole	25013-16-5	Trace
Ethyl alcohol	64-17-5	246.5
Methyl alcohol	67-56-1	13.5
Isopropyl alcohol	67-63-0	5
Potassium iodide	7681-11-0	9
Disodium 4,5-dihydroxy-3-phenylazonaphthalene-2,7-disulphonate	4197-07-3	<1.0
D-Limonene	5989-27-5	>98

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

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. If vomiting

occurs naturally, have victim lean forward.

**Inhalation** Remove to fresh air. If breathing is difficult, give oxygen. 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. Risk of serious damage to the lungs (by

aspiration).

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.

Most important symptoms and effects, both acute and delayed

Difficulty in breathing. May cause allergic skin reaction. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. 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.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

#### Extinguishing media

#### **Suitable Extinguishing Media**

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

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

No information available.

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

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

#### **Hazardous Combustion Products**

None under normal use conditions.

#### Advice for fire-fighters

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.

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## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

#### **Environmental precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.

#### Methods and Material for Containment and Cleaning Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

#### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

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

#### Precautions for Safe Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

#### 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.

#### Specific End Uses

Use in laboratories.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Control Parameters**

Component	Malaysia	ACGIH TLV	OSHA PEL
Acetic acid		TWA: 10 ppm STEL: 15 ppm	(Vacated) TWA: 10 ppm (Vacated) TWA: 25 mg/m³ TWA: 10 ppm TWA: 25 mg/m³
Phosphotungstic acid		TWA: 3 mg/m <sup>3</sup>	
lodine		TWA: 0.01 ppm STEL: 0.1 ppm	Ceiling: 0.1 ppm Ceiling: 1 mg/m³ (Vacated) Ceiling: 0.1 ppm (Vacated) Ceiling: 1 mg/m³
Ethyl alcohol		STEL: 1000 ppm	(Vacated) TWA: 1000 ppm (Vacated) TWA: 1900 mg/m³ TWA: 1000 ppm TWA: 1900 mg/m³
Methyl alcohol		TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m³ (Vacated) STEL: 250 ppm

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		(Vacated) STEL: 325 mg/m³ Skin TWA: 200 ppm TWA: 260 mg/m³
Isopropyl alcohol	TWA: 200 ppm STEL: 400 ppm	(Vacated) TWA: 400 ppm (Vacated) TWA: 980 mg/m³ (Vacated) STEL: 500 ppm (Vacated) STEL: 1225 mg/m³ TWA: 400 ppm TWA: 980 mg/m³
Potassium iodide	TWA: 0.01 ppm	

Component	European Union	The United Kingdom	Germany
Acetic acid	TWA: 25 mg/m³ (15min) TWA: 10 ppm (15min)	STEL: 37 mg/m <sup>3</sup> STEL: 15 ppm	TWA: 10 ppm (8 Stunden). AGW - exposure factor 2
	STEL: 50 mg/m³ (8h)	TWA: 10 ppm	TWA: 25 mg/m³ (8 Stunden). AGW -
	STEL: 20 ppm (8h)	TWA: 25 mg/m <sup>3</sup>	exposure factor 2
		Ĭ	TWA: 10 ppm (8 Stunden). MAK
			TWA: 25 mg/m³ (8 Stunden). MAK
			Höhepunkt: 20 ppm
			Höhepunkt: 50 mg/m <sup>3</sup>
lodine		STEL: 0.1 ppm; 1.1mg/m <sup>3</sup>	TWA: 0.1 ppm
			TWA: 1.1 mg/m <sup>3</sup>
			skin absorber
Butylated hydroxyanisole			TWA: 20 mg/m³ (8 Stunden). AGW -
			exposure factor 1
			TWA: 20 mg/m³ (8 Stunden). MAK
			can occur as vapor and aerosol at
			the same time
F		TIME 1000 TIME 1000 / 3	Höhepunkt: 20 mg/m³
Ethyl alcohol		TWA: 1000 ppm TWA; 1920 mg/m <sup>3</sup> TWA	200 ppm TWA MAK; 380 mg/m <sup>3</sup> TWA MAK
		WEL - STEL: 3000 ppm STEL;	
		5760 mg/m <sup>3</sup> STEL	
Methyl alcohol	TWA: 200 ppm 8 hr	WEL - TWA: 200 ppm TWA; 266	100 ppm TWA MAK; 130 mg/m <sup>3</sup>
	TWA: 260 mg/m <sup>3</sup> 8 hr	mg/m³ TWA	TWA MAKSkin absorber
	Skin	WEL - STEL: 250 ppm STEL; 333	
		mg/m³ STEL	T1/4 000 (0.0)
Isopropyl alcohol		STEL: 500 ppm 15 min	TWA: 200 ppm (8 Stunden). AGW -
		STEL: 1250 mg/m³ 15 min	exposure factor 2
		TWA: 400 ppm 8 hr TWA: 999 mg/m <sup>3</sup> 8 hr	TWA: 500 mg/m³ (8 Stunden). AGW
		TWA. 999 mg/m² 8 m	- exposure factor 2 TWA: 200 ppm (8 Stunden). MAK
			TWA: 200 ppm (8 Stunden). MAK
			Höhepunkt: 400 ppm
			Höhepunkt: 1000 mg/m <sup>3</sup>
D-Limonene			TWA: 5 ppm (8 Stunden). AGW -
			exposure factor 4
			TWA: 28 mg/m³ (8 Stunden). AGW -
			exposure factor 4
			TWA: 5 ppm (8 Stunden). MAK
			TWA: 28 mg/m <sup>3</sup> (8 Stunden). MAK
			Höhepunkt: 20 ppm
			Höhepunkt: 112 mg/m <sup>3</sup>
			Haut

## **Exposure Controls**

#### **Engineering Measures**

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

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

#### Personal protective equipment

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Eye Protection Goggles
Hand Protection Protective gloves

Hand Protection Protective gloves
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

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

<u>Hygiene Measures</u> Handle in accordance with good industrial hygiene and safety practice

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

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

Information on basic physical and chemical properties

**Appearance** 

Physical State Liquid

Odor No information available
Odor Threshold No data available
pH No information available

Melting Point/RangeNo data availableSoftening PointNo data availableBoiling Point/RangeNo information available

Flash Point No information available Method - No information available

Evaporation Rate No data available Flammability (solid,gas) Not applicable

Flammability (solid,gas) Not applicable Liquid Explosion Limits No data available

Vapor Pressure No data available

Vapor DensityNo data available(Air = 1.0)Specific Gravity / DensityNo data available

Bulk Density Not applicable Liquid

Water Solubility
Solubility in other solvents
No information available
No information available

Partition Coefficient (n-octanol/water)

Componentlog PowAcetic acid-0.2Iodine2.49

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Butylated hydroxyanisole 3.335
Ethyl alcohol -0.32
Methyl alcohol -0.74
Isopropyl alcohol 0.05
Potassium iodide 0.04
D-Limonene 4.38

Autoignition Temperature Decomposition Temperature

Viscosity

**Explosive Properties**Oxidizing Properties

No data available No data available No data available

No information available

VOC Content(%) 366.5

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

Reactivity

None known, based on information available.

**Chemical Stability** 

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization Hazardous Reactions

Hazardous polymerization does not occur.

None under normal processing.

Conditions to Avoid

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

Vapors may form explosive mixtures with air

sources of ignition.

**Incompatible Materials** 

None known.

**Hazardous Decomposition Products** 

None under normal use conditions.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

Information on Toxicological Effects

**Acute Toxicity** 

Toxicology data for the components

#### **Trichrome Stain Set**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetic acid	3310 mg/kg (Rat)	-	> 40 mg/L (Rat) 4 h
C.I. Acid Green 5	LD50 > 2 g/kg (Rat)		
Fast green fcf	LD50 > 2 g/kg ( Rat )		
Phosphotungstic acid	LD50 = 3300 mg/kg ( Rat )		
lodine	315 mg/kg ( Rat )	1425 mg/kg(Rabbit)	4.588 mg/L 4h ( Rat )
Butylated hydroxyanisole	LD50 = 2 g/kg (Rat)	LD50 > 2000 mg/kg (Rat)	
Ethyl alcohol	LD50 = 7060 mg/kg (Rat)		20000 ppm/10H ( Rat )
Methyl alcohol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg ( Rabbit )	LC50 = 128.2 mg/L ( Rat ) 4 h
Isopropyl alcohol	5045 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat)	72.6 mg/L (Rat) 4 h
Potassium iodide	2779 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	
D-Limonene	LD50 = 5200 mg/kg ( Rat )	LD50 > 5 g/kg (Rabbit)	

Chronic Toxicity

**Carcinogenicity** This product contains one or more substances which are classified by IARC as

carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B) The table below indicates whether each agency has

listed any ingredient as a carcinogen

Component	IARC	UK
Butylated hydroxyanisole	Group 2B	

SensitizationNo information availableMutagenic EffectsNo information availableReproductive EffectsNo information availableDevelopmental EffectsNo information available

Target Organs None known.

**Symptoms** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness,

tiredness, nausea and vomiting. 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.

**Endocrine Disruptor Information** 

Component	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Butylated hydroxyanisole	Group III Chemical		

## **SECTION 12: ECOLOGICAL INFORMATION**

**Ecotoxicity effects** 

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. Contains a substance which is:. Very toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Acetic acid	Pimephales promelas:	EC50 = 95 mg/L/24h	=	Photobacterium
	LC50 = 88  mg/L/96h	_		phosphoreum: EC50 =
	Lepomis macrochirus:			8.8 mg/L/15 min
	LC50 = 75  mg/L/96h			Photobacterium
				phosphoreum: EC50 =

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				8.8 mg/L/25 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/5 min
Iodine	Oncorhynchus mykiss: LC50 = 1,7 mg/l/96 h	EC50 = 0,2 mg/l/48 h	-	-
Ethyl alcohol	Fathead minnow (Pimephales promelas) LC50 = 14200 mg/l/96h	EC50 = 9268 mg/L/48h EC50 = 10800 mg/L/24h	EC50 (72h) = 275 mg/l (Chlorella vulgaris)	Photobacterium phosphoreum:EC50 = 34634 mg/L/30 min Photobacterium phosphoreum:EC50 = 35470 mg/L/5 min
Methyl alcohol	LC50 > 10000 mg/L 96h			EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min
Isopropyl alcohol	LC50: = 9640 mg/L, 96h flow-through (Pimephales promelas) LC50: > 1400000 µg/L, 96h (Lepomis macrochirus) LC50: = 11130 mg/L, 96h static (Pimephales promelas) LC50: = 10000000 µg/L, 96h (Daphnia)	13299 mg/L EC50 = 48 h 9714 mg/L EC50 = 24 h	(Desmodesmus	Photobacterium phosphoreum 5 min
Potassium iodide	Onchorhynchus mykiss: LC50: 3200 mg/L/120h	-	-	-
D-Limonene	LC50: = 35 mg/L, 96h (Oncorhynchus mykiss) LC50: 0.619 - 0.796 mg/L, 96h flow-through (Pimephales promelas)			

Persistence and degradability
Persistence

No information available
Persistence is unlikely.

Component	Degradability
Methyl alcohol	DT50 ~ 17.2d
67-56-1 (13.5.)	>94% after 20d

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Acetic acid	-0.2	No data available
lodine	2.49	No data available
Butylated hydroxyanisole	3.335	No data available
Ethyl alcohol	-0.32	No data available
Methyl alcohol	-0.74	<10 dimensionless
Isopropyl alcohol	0.05	No data available
Potassium iodide	0.04	No data available
D-Limonene	4.38	No data available

Mobility in soil No information available.

Other adverse effects No information available

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## **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste treatment methods

Waste from Residues/Unused

**Products** 

Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or

disposal

Other Information Do not flush to sewer

## **SECTION 14: TRANSPORT INFORMATION**

IMDG/IMO Not regulated

Road and Rail Transport Not regulated

IATA Not regulated

Special Precautions for User No special precautions required

## **SECTION 15: REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture

**International Inventories** X = listed

Component	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	IECSC	AICS	KECL
Acetic acid	200-580-7	Х	Х	Х	Х	X	Χ	Χ	X
C.I. Acid Green 5	225-906-5	Х	Х	-	Х	X	Х	Х	-
Fast green fcf	219-091-5	Х	Х	Х	Х	X	Χ	Χ	KE-07714
Phosphotungstic acid	235-087-6	Х	Х	Х	Х	X	-	Х	KE-35014
lodine	231-442-4	X	Х	X	X		Х	Х	KE-21023
Butylated hydroxyanisole	246-563-8	Х	Х	Х	Х	Х	Х	Х	KE-11392
Ethyl alcohol	200-578-6	Х	Х	Х	Х	Х	Х	Х	KE-13217
Methyl alcohol	200-659-6	Х	X	Х	Х	X	Х	Χ	KE-23193
Isopropyl alcohol	200-661-7	Х	Х	Х	Х	X	Χ	Χ	KE-29363
Potassium iodide	231-659-4	X	Х	X	X	X	Х	Χ	KE-29149
Disodium	224-085-0	-	-	-	-		Х	Х	-
4,5-dihydroxy-3-phenylazonaphtha									
lene-2,7-disulphonate									
D-Limonene	227-813-5	Х	Х	Х	Х	X	X	Х	KE-24397

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Acetic acid				Annex I - Y34
Ethyl alcohol				Annex I - Y42
Methyl alcohol	500 tonne	5000 tonne		
Isopropyl alcohol				Annex I - Y42

## National Regulations

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**Persistent Organic Pollutant** This product does not contain any known or suspected substance **Ozone Depletion Potential** This product does not contain any known or suspected substance

Component	Persistent Organic Pollutant	Ozone Depletion Potential	Pesticides Act 1974
D-Limonene			X

## **SECTION 16: OTHER INFORMATION**

#### Legend

**CAS** - Chemical Abstracts Service

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

Substances/EU List of Notified Chemical Substances

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

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

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

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

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

TWA - Time Weighted Average **ACGIH** - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

IARC - International Agency for Research on Cancer LD50 - Lethal Dose 50%

LC50 - Lethal Concentration 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

ADR - European Agreement Concerning the International Carriage of

Dangerous Goods by Road IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

**Transport Association** MARPOL - International Convention for the Prevention of Pollution from

ICAO/IATA - International Civil Aviation Organization/International Air

Shins

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

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

**Revision Date** 29-Mar-2023 Not applicable. **Revision Summary** 

In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

#### 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**