

Page 1 / 12 Creation Date 15-Apr-2015 Revision Date 17-Jun-2024 Version 6

SDS No. Exempt, SR&D

MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical Substances and Safety Data Sheets)

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

Product Identifier

Product Description: Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

Cat No. : 45500

Molecular Formula C24 H45 BiO6

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

Importer Supplier

Fisher Scientific Korea Thermo Fisher Scientific Chemicals, Inc.

D5,D6, Incheon Airport Logistics Complex 30 Bond Street

150, Gonghangdong-Ro 296 Beon-Gil Ward Hill, MA 01835-8099

Jung-Gu, Incheon Tel: +82-1661-9555 Fax: +82-2-2023-0603

E-mail address Chem.KR@thermofisher.com

Emergency Telephone Number

Emergency telephone: Medical: +(82) 070-7686-0086 or + 1-703-741-5970

CHEMTREC: 080 822 1374 (Local), CHEMTREC: 1-800-424-9300 or + 1-703-527-3887

Korea: 00-308-13-2549 (24 hours a day, 7 days a week)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Reproductive Toxicity Category 1

Environmental hazards

Based on available data, the classification criteria are not met

Label Elements

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid



Signal Word Danger

Hazard Statements

H360 - May damage fertility or the unborn child

Precautionary Statements

Prevention

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

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

Response

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

Disposal

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

Other Hazards

This product does not contain any known or suspected endocrine disruptors Toxic to terrestrial vertebrates

NFPA

Health Flammability Instability Physical hazards
3 3 2 - W

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Component	Common Name	CAS No	Index No	Weight %
Hexanoic acid, 2-ethyl-, bismuth(3+)	No information	67874-71-9	2010-3-4642	90 - 95
salt	available			
2-Ethylhexanoic acid	2-Ethylcapronic acid	149-57-5	KE-13740	>=5 - <10

SECTION 4: FIRST AID MEASURES

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.

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

symptoms occur.

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

Revision Date 17-Jun-2024

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

None reasonably foreseeable. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. 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. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

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

Special hazards arising from the substance or mixture

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

Bismuth oxide, Carbon oxides.

Advice for fire-fighters

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

Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation. Use personal protective equipment as required.

Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods and Material for Containment and Cleaning Up

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

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Revision Date 17-Jun-2024

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

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

Conditions for Safe Storage, Including any Incompatibilities

Corrosives area. Keep away from heat, sparks and flame. Flammables area. Keep containers tightly closed in a dry, cool and well-ventilated place. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	CAS No	Korea	ACGIH TLV	OSHA PEL
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not listed	Not listed	Not listed
2-Ethylhexanoic acid	149-57-5	Not listed	TWA: 5 mg/m ³	Not listed

Component	CAS No	European Union	The United Kingdom	Germany
Hexanoic acid, 2-ethyl-,	67874-71-9	Not listed	Not listed	Not listed
bismuth(3+) salt				
2-Ethylhexanoic acid	149-57-5	Not listed	Not listed	Not listed

ACGIH - Biological Exposure Indices

Component	CAS No	ACGIH - Biological Exposure Indices
Hexanoic acid, 2-ethyl-,	67874-71-9	Not listed
bismuth(3+) salt		
2-Ethylhexanoic acid	149-57-5	Not listed

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

Eye Protection Goggles

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.

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

Revision Date 17-Jun-2024

Personal protective equipment

Respiratory Protection

Use only those certified by the Korea Occupational Safety and Health Administration.

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

appropriate certified respirators

low boiling organic solvent Type AX Brown conforming to EN371 or Organic gases and **Recommended Filter type:**

vapours filter Type A Brown conforming to EN14387 Particulates filter conforming to EN

143 Acid gases filter Type E Yellow

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

(Air = 1.0)

Liquid

and maintained properly

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

Handle in accordance with good industrial hygiene and safety practice **Hygiene Measures**

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (Physical State, Color, Liquid

etc.)

No information available Odor No data available **Odor Threshold** No information available Hq

Melting Point/Range No data available **Softening Point** No data available **Boiling Point/Range** No information available

Flash Point Method - No information available No information available

Evaporation Rate No data available

Flammability (solid, gas) Not applicable Liquid

Explosion Limits No data available

Vapor Pressure No data available No data available **Vapor Density**

Specific Gravity / Density No data available

Not applicable **Bulk Density**

Water Solubility Immiscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

	1	
Component	CAS No	log Pow
Hexanoic acid, 2-ethyl-, bismuth(3+)	67874-71-9	No data available
salt		
2-Ethylhexanoic acid	149-57-5	2.7

Autoignition Temperature No data available **Decomposition Temperature** No data available **Viscosity** No data available

Explosive Properties

Vapors may form explosive mixtures with air

Oxidizing Properties No information available

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

Molecular Formula C24 H45 BiO6

Molecular Formula C24 H45
Molecular Weight 638.61

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Yes

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization No information available.
Hazardous Reactions None under normal processing.

Conditions to Avoid

Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials

None known.

Hazardous Decomposition Products

Bismuth oxide. Carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

Information on expected route of exposure

InhalationAvoid breathing vapors or mists.IngestionMay be harmful if swallowed.EyesAvoid contact with eyes.

Skin Avoid contact with skin. Prolonged skin contact may defat the skin and produce dermatitis.

Information on Health Hazards

(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	CAS No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	No data available	LD50 > 2000 mg/kg (Rat)	No data available
2-Ethylhexanoic acid	149-57-5	LD50 = 1600 mg/kg (Rat)	LD50 = 1140 mg/kg(Rabbit)	No data available

(b) skin corrosion/irritation; No data available

ALFAA45500

Revision Date 17-Jun-2024

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

RespiratorySkin
No data available
No data available

Component	CAS No	Test method	Test species	Study result
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	No data available	No data available	No data available
2-Ethylhexanoic acid	149-57-5	No data available	No data available	No data available

No information available

(e) germ cell mutagenicity; No data available

Component	CAS No	Test method	Test species	Study result
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	No data available	No data available	No data available
2-Ethylhexanoic acid	149-57-5	No data available	No data available	No data available

(f) carcinogenicity; No data available

Component	CAS No	Test method	Test species / Duration	Study result
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	No data available	No data available	No data available
2-Ethylhexanoic acid	149-57-5	No data available	No data available	No data available

Limited evidence of a carcinogenic effect The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	UK
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not listed				
2-Ethylhexanoic acid	149-57-5	Not listed				

IARC (International Agency for IARC (International Agency for Research on Cancer)

Research on Cancer) Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program) NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists) A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

(g) reproductive toxicity; Category 1

Component	CAS No	Test method	Test species / Duration	Study result
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	No data available	No data available	No data available
2-Ethylhexanoic acid	149-57-5	No data available	No data available	No data available

(h) STOT-single exposure; No data available

Results / Target organs Central nervous system (CNS).

(i) STOT-repeated exposure; No data available

Target Organs None known.

(j) aspiration hazard; No data available

Revision Date 17-Jun-2024

Revision Date 17-Jun-2024

Other Adverse Effects

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. 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	CAS No	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	CAS No	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Hexanoic acid, 2-ethyl-, bismuth(3+)	67874-71-9	No data available	No data available	No data available	No data available
salt 2-Ethylhexanoic acid	149-57-5	LC50: = 70 mg/L, 96h (Pimephales promelas)	EC50: = 85.4 mg/L, 48h (Daphnia magna)	96h (Desmodesmus	EC50 = 670 mg/L 30 min

Persistence and degradability

Product contains heavy metals. Discharge into the environment must be avoided. Special

pre-treatment is necessary

Persistence

May persist, based on information available.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

Bioaccumulative potential_	May have some potential to bioaccumulate; Product has a high potential to bioconcer				
Component	log Pow	Bioconcentration factor (BCF)			
2 Ethylhoxanoic acid	2.7	No data available			

Mobility in soil

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility. Is not likely mobile in the environment due its low water solubility and propensity to bind to soil particles.

Ozone Depletion Potential

Component	CAS No	Ozone Depletion Potential
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not listed
2-Ethylhexanoic acid	149-57-5	Not listed

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose in accordance with the Wastes Control Act (폐기물관리법).

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

Revision Date 17-Jun-2024

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.

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. Large amounts will affect pH and harm aquatic

organisms.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport Not Regulated

IATA Not regulated

IMDG/IMO Not regulated

Marine Pollutant No hazards identified

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

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

Legend: X - Listed '-' - Not Listed

International Inventories

Component	CAS No	KECL	TSCA	EINECS	IECSC	DSL	NDSL	PICCS	ENCS	ISHL	AICS
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	2010-3-4642	Х	267-499-7	X	Х	-	Х	Х	Х	Х
2-Ethylhexanoic acid	149-57-5	KE-13740	Х	205-743-6	Х	Х	-	Х	Х	Х	Х

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	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable	Annex I - Y34

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Listed	Not applicable	Not applicable

Korean National Regulations

Component	CAS No	Act on Registration and Evaluation of Chemical Substances (K-REACH)	Authorised Chemicals	Existing Substances Subject to Registration
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Annex 2 - 2010-3-4642	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Annex 1 - KE-13740	Not applicable	Not applicable

Toxic Chemicals Prohibited Chemicals Use Restricted	Component	CAS No	Chemical Control Act -	Chemical Control Act -	Chemical Control Act -
	-		Toxic Chemicals	Prohibited Chemicals	Use Restricted

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

Revision Date 17-Jun-2024

				Chemicals
Hexanoic acid, 2-ethyl-, bismuth(3+)	67874-71-9	Not applicable	Not applicable	Not applicable
salt				
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

Component	CAS No	Chemical Control Act - Accident Precaution Chemicals (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Storage (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Manufacture/Use (% in mixtures)
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

Component	CAS No	Waste Control Law	Ministry of Environment - CMR risk	Ministry of Environment - Critically Controlled Substance
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Harmful Agents Subject to Work Environment Monitoring	ISHA - Prohibited substances	ISHA - Substances requiring permission
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Substances subject to control	ISHA - Harmful Agents Requiring Health Examination	ISHA - Permissible Exposure Limits
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Subject to Process Safety Reports (minimum quantity)	ISHA - Threshold Limit Values (TLVs) Chemicals	ISHA - Special management materials
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

National Fire Association - Dangerous Substances Minimum quantity requiring a permit

Component	CAS No	Class 1 - Oxidising solids	Class 2 - Flammable solid	Class 3 - Spontaneously Combustible Substances and Dangerous Substances When Wet	Class 4 - Flammable liquids	Class 5 - Self-reactive substances	Class 6 - Oxidising liquids
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Control Parameters

Component	CAS No	Korea	ACGIH - Biological Exposure Indices
Hexanoic acid, 2-ethyl-, bismuth(3+)	67874-71-9	Not listed	Not listed
salt			
2-Ethylhexanoic acid	149-57-5	Not listed	Not listed

US Management Information

OSHA - Occupational Safety and Health Administration

Not applicable

Component	CAS No	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable

CERCLA Not applicable

Component	CAS No	CERCLA Extremely Hazardous Substances RQs	Hazardous Substances RQs	SARA 313 - Threshold Values %
Hexanoic acid, 2-ethyl-, bismuth(3+) salt	67874-71-9	Not applicable	Not applicable	Not applicable
2-Ethylhexanoic acid	149-57-5	Not applicable	Not applicable	Not applicable

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Danger.

H360D - May damage the unborn child. H361d - Suspected of damaging the unborn child.

P201 - Obtain special instructions before use. P280 - Wear protective gloves/protective clothing/eye protection/face protection.

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

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

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

Revision Date 17-Jun-2024

Inventory

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

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

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

Page 11/12

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

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

Bismuth 2-ethylhexanoate, 92% in 2-ethylhexanoic acid

Revision Date 17-Jun-2024

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.

Prepared By Health, Safety and Environmental Department

Creation Date 15-Apr-2015 Revision Date 17-Jun-2024

Revision Number 6

Revision Summary New emergency telephone response service provider.

MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical Substances and Safety Data Sheets)

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