

Page 1/13 Creation Date 15-Apr-2015 Revision Date 12-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: Benzene, thiophene free, 99+%

Cat No. : R12400

Synonyms Cyclohexatriene; Phenyl hydride.; Benzol

CAS No 71-43-2 Molecular Formula C6H6

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

Flammable liquids Category 2

Health hazards

Aspiration hazard Category 1
Skin Corrosion/Irritation Category 2
Serious Eye Damage/Eye Irritation Category 2
Germ Cell Mutagenicity Category 1B
Carcinogenicity Category 1A
Specific target organ toxicity - (repeated exposure) Category 1

Environmental hazards

Revision Date 12-Jun-2024

Chronic aquatic toxicity Category 2

Label Elements



Signal Word

Danger

Hazard Statements

- H225 Highly flammable liquid and vapor
- H304 May be fatal if swallowed and enters airways
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H340 May cause genetic defects
- H350 May cause cancer
- H372 Causes damage to organs through prolonged or repeated exposure
- H411 Toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

- P201 Obtain special instructions before use
- ${\sf P202}$ Do not handle until all safety precautions have been read and understood
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P233 Keep container tightly closed
- P240 Ground and bond container and receiving equipment
- P242 Use non-sparking tools
- P243 Take action to prevent static discharges
- P260 Do not breathe dust/fume/gas/mist/vapors/spray
- P264 Wash face, hands and any exposed skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P280 Wear eye protection/ face protection
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P273 Avoid release to the environment

Response

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P308 + P313 IF exposed or concerned: Get medical advice/attention
- P331 Do NOT induce vomiting
- P332 + P313 If skin irritation occurs: Get medical advice/attention
- P363 Wash contaminated clothing before reuse
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal

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

Other Hazards

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

Benzene, thiophene free, 99+%

NFPA

HealthFlammabilityInstabilityPhysical hazards330N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	Common Name	CAS No	Index No	Weight %
Benzene	No information	71-43-2	KE-02150	99 - 100
Benzene	available	/1-43-2	KE-02150	

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 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. 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. Inhalation of high vapor concentrations may cause symptoms like

headache, dizziness, tiredness, nausea and vomiting.

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

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.

ALFAAR12400

Revision Date 12-Jun-2024

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

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

Carbon monoxide (CO), Carbon dioxide (CO2).

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment as required. Ensure adequate ventilation. 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

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. 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

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. 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. Flammables area. Keep away from heat, sparks and flame.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	CAS No	Korea	ACGIH TLV	OSHA PEL
Benzene	71-43-2	STEL: 2.5 ppm	TWA: 0.5 ppm	(Vacated) TWA: 10 ppm
		TWA: 0.5 ppm	STEL: 2.5 ppm	Ceiling: 25 ppm
		Skin	Skin	(Vacated) STEL: 50 ppm
				(Vacated) Ceiling: 25 ppm
				TWA: 10 ppm
				TWA: 1 ppm
				STEL: 5 ppm

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

Component	CAS No	European Union	The United Kingdom	Germany
Benzene	71-43-2	TWA: 0.2 ppm (8h)	STEL: 3 ppm 15 min	Haut
		TWA: 0.66 mg/m ³ (8h)	STEL: 9.75 mg/m ³ 15 min	
		Skin	TWA: 1 ppm 8 hr	
			TWA: 3.25 mg/m ³ 8 hr	
			Carc.	
			Skin	

ACGIH - Biological Exposure Indices

Component	CAS No	ACGIH - Biological Exposure Indices	
Benzene	71-43-2	25 μg/g creatinine	
		Medium: urine	
		Time: end of shift	
		Determinant: S-Phenylmercapturic acid	
		500 μg/g creatinine	
		Medium: urine	
		Time: end of shift	
		Determinant: t,t-Muconic acid	

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 control hazardous materials at source

Personal protective equipment

Eye Protection Goggles

Hand Protection Protective gloves

Skin and body protectionWear appropriate protective gloves and clothing to prevent skin exposure

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.

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

Recommended Filter type:

Organic gases and vapours filter Type A Brown conforming to EN14387

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

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls Prevent

Prevent product from entering drains Do not allow material to contaminate ground water

system

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Benzene, thiophene free, 99+% Revision Date 12-Jun-2024

Information on basic physical and chemical properties Appearance (Physical State, Color, Clear Colorless Liquid

etc.)

Odor aromatic

Odor Threshold No data available

Hq Not applicable

5.5 °C / 41.9 °F **Melting Point/Range Softening Point** No data available **Boiling Point/Range** 80.1 °C / 176.2 °F Flash Point -11 °C / 12.2 °F

Method - No information available

Vapors may form explosive mixtures with air

Evaporation Rate No information available

Flammability (solid,gas) Not applicable Liquid **Explosion Limits Lower** 1.3%

Upper 7.1%

75 mmHg @ 20 °C **Vapor Pressure**

Vapor Density 2.8 (Air = 1.0)(Air = 1.0)

Specific Gravity / Density No data available 0.8765 @ 20°C

Bulk Density Not applicable

Water Solubility 0.18 g/100 ml @ 25 °C Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

	,	
Component	CAS No	log Pow
Benzene	71-43-2	2.13

Liquid

Autoignition Temperature

Decomposition Temperature Viscosity

Explosive Properties

No data available No data available

498 °C / 928.4 °F

Oxidizing Properties

No information available

Molecular Formula C6H6 **Molecular Weight** 78.11

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 polymerization does not occur.

None under normal processing. **Hazardous Reactions**

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

sources of ignition.

Benzene, thiophene free, 99+%

Incompatible Materials

Strong oxidizing agents.

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

Information on expected route of exposure

Inhalation Avoid breathing vapors or mists.

Ingestion May be harmful if swallowed. Harmful if swallowed. Potential for aspiration if swallowed.

Eyes Avoid contact with eyes. Irritating to eyes. Vapor may cause irritation.

Skin Avoid contact with skin. May cause irritation. Prolonged skin contact may defat the skin and

produce dermatitis.

Information on Health Hazards

(a) acute toxicity;

OralBased on available data, the classification criteria are not metDermalBased on available data, the classification criteria are not metInhalationBased on available data, the classification criteria are not met

Component	CAS No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Benzene	71-43-2	LD50 = 810 mg/kg (Rat	LD50 > 8200 mg/kg (Rabbit)	LC50 = 44.66 mg/L (Rat) 4 h
)	Rabbit)	Rat) 4 fi

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory SkinNo data available

No data available

Component	CAS No	Test method	Test species	Study result
Benzene	71-43-2	No data available	No data available	No data available

(e) germ cell mutagenicity; No data available

L	Component	CAS No	Test method	Test species	Study result
	Benzene	71-43-2	No data available	No data available	No data available

May cause heritable genetic damage

(f) carcinogenicity; No data available

Component	CAS No	Test method	Test species / Duration	Study result
Benzene	71-43-2	No data available	No data available	No data available

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

ALFAAR12400

Revision Date 12-Jun-2024

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

CAS No IARC ACGIH **OSHA** Component NTP Benzene 71-43-2 Group 1 Known Not listed A1

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 A1 - Known Human Carcinogen Governmental Industrial Hygienists) A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

No data available (g) reproductive toxicity;

Component	CAS No	Test method	Test species / Duration	Study result
Benzene	71-43-2	No data available	No data available	No data available

No data available (h) STOT-single exposure;

(i) STOT-repeated exposure; Category 1

No information available. **Target Organs**

(j) aspiration hazard; Category 1

Other Adverse Effects

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

	Component	CAS No	EU - Endocrine	EU - Endocrine	Japan - Endocrine
	·		Disrupters Candidate	Disruptors - Evaluated	Disruptor Information
			List	Substances	-
I	Benzene	71-43-2	Not applicable	Not applicable	Not applicable

SECTION 12: ECOLOGICAL INFORMATION

The product contains following substances which are hazardous for the environment. **Ecotoxicity effects** Contains a substance which is:. Toxic to aquatic organisms.

Component **CAS No** Freshwater Fish Water Flea Freshwater Algae **Microtox** 71-43-2 LC50: = 22.49 mg/L EC50: = 10 mg/L,EC50: = 29 mg/L, No data available Benzene 48h (Daphnia 96h static (Lepomis 72h macrochirus) magna) (Pseudokirchneriella LC50: = 5.3 mg/L,EC50: 8.76 - 15.6 subcapitata) mg/L, 48h Static 96h flow-through (Oncorhynchus (Daphnia magna)

mykiss) LC50: 70000 -142000 µg/L, 96h static (Lepomis macrochirus) LC50: = 28.6 mg/L96h static (Poecilia reticulata) LC50: 22330 -41160 µg/L, 96h static (Pimephales promelas) LC50: 10.7 - 14.7

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

	mg/L, 96h flow-through (Pimephales promelas)		
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Persistence and degradability

Persistence

Persistence is unlikely, 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 Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Benzene	2.13	3.5 - 4.4 dimensionless

Mobility in soil

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in

air.

Ozone Depletion Potential

Component	CAS No	Ozone Depletion Potential
Benzene	71-43-2	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).

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 Do not flush to sewer. Waste codes should be assigned by the user based on the

application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not

empty into drains.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport

UN-No UN1114
Proper Shipping Name BENZENE

Proper Shipping Name BEN Hazard Class 3

Packing Group

IATA

UN-No UN1114
Proper Shipping Name BENZENE

Hazard Class 3
Packing Group II

IMDG/IMO

UN-No UN1114
Proper Shipping Name BENZENE

Hazard Class 3

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

Packing Group

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
Benzene	71-43-2	KE-02150	Х	200-753-7	Χ	Х	-	Х	Х	Х	Х

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
		Notification	Requirements		
Benzene	71-43-2	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential
			Pollutant	Potentiai
Benzene	71-43-2	Listed	Not applicable	Not applicable

Korean National Regulations

Component		Act on Registration and Evaluation of Chemical Substances (K-REACH)		Existing Substances Subject to Registration
Benzene	71-43-2	Annex 1 - KE-02150	Not applicable	Listed

Component	CAS No	Chemical Control Act - Toxic Chemicals	Chemical Control Act - Prohibited Chemicals	Chemical Control Act - Use Restricted Chemicals
Benzene	71-43-2	1997-1-0099 (>85%)	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)
Benzene	71-43-2	>85%	10000 kg/yr	1500000 kg/yr

Component	CAS No	Waste Control Law	Ministry of Environment -	
			CMR risk	Critically Controlled Substance
Benzene	71-43-2	> 85% (CCA)	Not applicable	CMR, STOT

CCA = Chemical Control Act

Component	CAS No	ISHA - Harmful Agents Subject to Work Environment Monitoring	ISHA - Prohibited substances	ISHA - Substances requiring permission
Benzene	71-43-2	Listed	Not applicable	Not applicable

Component CAS No ISHA - Substances ISHA - Harmful Agents ISHA - Permissible

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

		subject to control	Requiring Health Examination	Exposure Limits
Benzene	71-43-2	Listed	Listed	0.5 ppm TWA 2.5 ppm STEL

Component	CAS No	ISHA - Subject to Process Safety Reports (minimum quantity)	ISHA - Threshold Limit Values (TLVs) Chemicals	ISHA - Special management materials
Benzene	71-43-2	5000 kg	STEL: 2.5 ppm TWA: 0.5 ppm Skin	Formulations containing 0.1% or more

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	liquids	Class 5 - Self-reactive substances	Class 6 - Oxidising liquids
Benzene	71-43-2	Not applicable	Not applicable	Not applicable	2. Group 1 Petroleum (Insoluble) 200 L	Not applicable	Not applicable

Control Parameters

Component	CAS No	Korea	ACGIH - Biological Exposure Indices
Benzene	71-43-2	STEL: 2.5 ppm	25 μg/g creatinine
		TWA: 0.5 ppm	Medium: urine
		Skin	Time: end of shift
			Determinant: S-Phenylmercapturic acid
			500 μg/g creatinine
			Medium: urine
			Time: end of shift
			Determinant: t,t-Muconic acid

US Management Information

OSHA - Occupational Safety and Health Administration

Not applicable

Component	CAS No	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Benzene	71-43-2	5 ppm STEL	Not applicable
		0.5 ppm Action Level	
		1 ppm TWA	

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355)

Component	CAS No	CERCLA Extremely Hazardous Substances RQs	Hazardous Substances RQs	SARA 313 - Threshold Values %
Benzene	71-43-2	Not applicable	10 lb	0.1 %

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

Danger.

H225 - Highly flammable liquid and vapor. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H340 - May cause genetic defects. H350 - May cause cancer. H372 - Causes damage to organs through prolonged or repeated exposure. H412 - Harmful to aquatic life with long lasting effects.

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking, P280 - Wear protective aloves/protective clothing/eve protection/face protection. P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 - IF exposed or concerned: Get medical advice/attention.

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

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

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment LC50 - Lethal 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 **OECD** - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

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

Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances NZIoC - New Zealand Inventory of Chemicals

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

ICAO/IATA - International Civil Aviation Organization/International Air

Transport Association

MARPOL - International Convention for the Prevention of Pollution from

Ships

ATE - Acute Toxicity Estimate VOC - (Volatile Organic Compound)

Key literature references and sources for data

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

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

Training Advice

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

Chemical incident response training.

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

Prepared By Health, Safety and Environmental Department

Creation Date 15-Apr-2015 **Revision Date** 12-Jun-2024

Revision Number

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

Benzene, thiophene free, 99+%

Revision Date 12-Jun-2024

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