

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

Creation Date 12-Jul-2012 Revision Date 09-Feb-2024 Revision Number 5

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

1.1. Product identifier

Product Description: <u>Hyamine Hydroxide</u>

Cat No. : BP2658-500

Synonyms Hydroxide of Hyamine.; Methylbenzethonium Hydroxide

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

Recommended Use Laboratory chemicals. Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company

UK entity/business name

Fisher Scientific UK Bishop Meadow Road,

Loughborough, Leicestershire LE11 5RG,

United Kingdom

EU entity/business 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 liquids Category 2 (H225)

Health hazards

ACRBP2658

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Acute oral toxicity

Acute dermal toxicity

Acute Inhalation Toxicity - Vapors

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Specific target organ toxicity - (single exposure)

Category 3 (H301)

Category 3 (H331)

Category 3 (H331)

Category 1 B (H314)

Category 1 (H318)

Category 1 (H370)

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

H225 - Highly flammable liquid and vapor

H314 - Causes severe skin burns and eye damage

H370 - Causes damage to organs

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

Precautionary Statements

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

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

P310 - Immediately call a POISON CENTER or doctor/physician

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 UK SI 2020/1567
Methyl alcohol	67-56-1	200-659-6	50 - 60	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)

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Benzenemethanaminium,	26248-39-5	EEC No. 247-537-9	40 - 50	Acute Tox. 4 (H302)
N,N-dimethyl-N-[2-[2-[methyl-4-(1,1,3,3-tetr				Skin Corr. 1B (H314)
amethylbutyl)phenoxy]ethoxy]ethy l]-,				
hydroxide				

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Methyl alcohol	STOT Single Exp. 1 :: >= 10 STOT Single Exp. 2 :: 3 - < 10	-	-

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Immediate medical attention is required.

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

attention is required.

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

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Immediate medical attention is required.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

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

Difficulty in breathing. Causes burns by all exposure routes. 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

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

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

No information available.

5.2. 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.

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Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NOx),

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

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.

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. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

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

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

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. 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. Corrosives area.

Technical Rules for Hazardous Substances (TRGS) 510 Class 3 Storage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Methyl alcohol	WEL - TWA: 200 ppm TWA;	TWA: 200 ppm 8 hr	TWA: 200 ppm 8 hr.
	266 mg/m³ TWA	TWA: 260 mg/m ³ 8 hr	TWA: 260 mg/m ³ 8 hr.
	WEL - STEL: 250 ppm	Skin	STEL: 600 ppm 15 min
	STEL; 333 mg/m ³ STEL		STEL: 780 mg/m ³ 15 min
	_		Skin

Biological limit values

List source(s):

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
	(Dermal)	systemic (Dermal)	(Dermal)	systemic (Dermal)
Methyl alcohol		DNEL = 20mg/kg		DNEL = 20mg/kg
67-56-1 (50 - 60)		bw/day		bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Methyl alcohol 67-56-1 (50 - 60)	DNEL = 130mg/m ³	DNEL = 130mg/m ³	DNEL = 130mg/m ³	DNEL = 130mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Methyl alcohol	PNEC = 20.8mg/L	PNEC = 77mg/kg	PNEC = 1540mg/L	PNEC = 100mg/L	PNEC = 100mg/kg
67-56-1 (50 - 60)		sediment dw		-	soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Methyl alcohol	PNEC = 2.08mg/L	PNEC = 7.7mg/kg			
67-56-1 (50 - 60)		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

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

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Viton (R)	See manufacturers	-		(minimum requirement)

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recommendations EN 374

Skin and body protection

Wear 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.

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

appropriate certified respirators.

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

and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits

are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: low boiling organic solvent Type AX Brown conforming to

EN371

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

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 Liquid

Colorless **Appearance** Odor Alcohol-like **Odor Threshold** No data available Melting Point/Range -30 °C / -22 °F **Softening Point** No data available 65 °C / 149 °F **Boiling Point/Range** Flammability (liquid) Highly flammable

On basis of test data

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

Explosion Limits

12 °C / 53.6 °F Method - No information available Flash Point

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

pН No information available No data available **Viscosity** Water Solubility Soluble in water

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

log Pow Component Methyl alcohol -0.74

Vapor Pressure 95 mmHg @ 20 °C

Density / Specific Gravity 0.933

Bulk Density Not applicable Liquid **Vapor Density** No data available (Air = 1.0)Particle characteristics Not applicable (liquid)

9.2. Other information

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Explosive Properties Vapors may form explosive mixtures with air

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

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

Incompatible products.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids. Isocyanates. Metals.

10.6. Hazardous decomposition products

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity;

OralCategory 3DermalCategory 3InhalationCategory 3

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyl alcohol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h
Benzenemethanaminium,	368 mg/kg (Rat)	-	-
N,N-dimethyl-N-[2-[2-[methyl-4-(1,1,3,3-tetr			
amethylbutyl)phenoxy]ethoxy]ethy l]-,			
hydroxide			

(b) skin corrosion/irritation; Category 1

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

RespiratorySkin
No data available
No data available

Component	Test method	Test species	Study result
Methyl alcohol	OECD Test Guideline 406	guinea pig	non-sensitising
67-56-1 (50 - 60)	Guinea Pig Maximisation Test		
	(GPMT)		

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(e) germ cell mutagenicity; No data available

No data available (f) carcinogenicity;

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

Component	Test method	Test species / Duration	Study result
Methyl alcohol	OECD Test Guideline 416	Rat / Inhalation	NOAEC =
67-56-1 (50 - 60)		2 Generation	1.3 mg/l (air)

(h) STOT-single exposure; Category 1

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

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

delayed

Symptoms / effects,both acute and 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.

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

Component	Freshwater Fish	Water Flea	Freshwater Algae
Methyl alcohol	Pimephales promelas: LC50 >	EC50 > 10000 mg/L 24h	
	10000 mg/L 96h		

Component	Microtox	M-Factor
Methyl alcohol	EC50 = 39000 mg/L 25 min	
	EC50 = 40000 mg/L 15 min	
	EC50 = 43000 mg/L 5 min	

12.2. Persistence and degradability

Persistence is unlikely, based on information available. **Persistence**

Component	Degradability	
Methyl alcohol	DT50 ~ 17.2d	
67-56-1 (50 - 60)	>94% after 20d	

Bioaccumulation is unlikely 12.3. Bioaccumulative potential

Component	log Pow	Bioconcentration factor (BCF)
Methyl alcohol	-0.74	<10 dimensionless

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12.4. 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

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. Large amounts will affect pH and harm aquatic

organisms.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number UN2924

14.2. UN proper shipping name Technical Shipping NameFlammable liquid, corrosive, n.o.s. (Methanol, Hyamine Hydroxide)

14.3. Transport hazard class(es)3Subsidiary Hazard Class814.4. Packing groupII

ADR

14.1. UN number UN2924

14.2. UN proper shipping nameFlammable liquid, corrosive, n.o.s.Technical Shipping Name(Methanol, Hyamine Hydroxide)

14.3. Transport hazard class(es)3Subsidiary Hazard Class814.4. Packing groupII

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IATA

14.1. UN number UN2924

14.2. UN proper shipping name Technical Shipping NameFlammable liquid, corrosive, n.o.s. (Methanol, Hyamine Hydroxide)

14.3. Transport hazard class(es)3Subsidiary Hazard Class814.4. Packing groupII

14.5. Environmental hazardsNo hazards identified

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk Not applicable, packaged goods

according to IMO instruments

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
Methyl alcohol	67-56-1	200-659-6	-	-	Х	X	KE-23193	X	X
Benzenemethanaminium,	26248-39-5	247-537-9	-	-	-	X	-	-	-
N,N-dimethyl-N-[2-[2-[methyl-4-(1,									
1,3,3-tetramethylbutyl)phenoxy]eth									
oxy]ethy l]-, hydroxide									

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Methyl alcohol	67-56-1	X	ACTIVE	X	Ī	Х	Х	X
Benzenemethanaminium, N,N-dimethyl-N-[2-[2-[methyl-4-(1, 1,3,3-tetramethylbutyl)phenoxy]eth oxy]ethy I]-, hydroxide	26248-39-5	-	-	Х	-	-	-	-

Legend: X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Methyl alcohol	67-56-1	-	Use restricted. See item 69. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	
Benzenemethanaminium, N,N-dimethyl-N-[2-[2-[methyl-4-(1,1, 3,3-tetramethylbutyl)phenoxy]ethoxy]ethy I]-, hydroxide		-	-	-

REACH links

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Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Methyl alcohol	67-56-1	500 tonne	5000 tonne
Benzenemethanaminium,	26248-39-5	Not applicable	Not applicable
N,N-dimethyl-N-[2-[2-[methyl			
-4-(1,1,3,3-tetramethylbutyl)			
phenoxy]ethoxy]ethy l]-,			
hydroxide			

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 Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

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

WGK Classification

Water endangering class = 2 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Methyl alcohol	WGK 2	Class I: 20 mg/m³ (Massenkonzentration)

Component	France - INRS (Tables of occupational diseases)
Methyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84

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
Methyl alcohol	Prohibited and Restricted	Group I	
67-56-1 (50 - 60)	Substances		
Benzenemethanaminium,	Prohibited and Restricted		
N,N-dimethyl-N-[2-[2-[methyl-4-(1,1,3,3-tetr	Substances		
amethylbutyl)phenoxy]ethoxy]ethy l]-,			
hydroxide			
26248-39-5 (40 - 50)			

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION

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H302 - Harmful if swallowed

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

H370 - Causes damage to organs if inhaled H225 - Highly flammable liquid and vapor

H370 - Causes damage to organs

Legend

CAS - Chemical Abstracts Service

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

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

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 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

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

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.

12-Jul-2012 **Creation Date Revision Date** 09-Feb-2024 **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