

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

Creation Date 27-Apr-2009 Revision Date 04-Oct-2023 Revision Number 3

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

#### 1.1. Product identifier

Product Description: <u>Methanol</u>

Cat No.: MTHRS41LI; XXMTHRS41LI; NC2039936

 Synonyms
 Methyl alcohol

 Index No
 603-001-00-X

 CAS No
 67-56-1

 EC No
 200-659-6

 Molecular Formula
 C H4 O

REACH registration number 01-2119433307-44-0232

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

**Recommended Use**Laboratory chemicals.

Sector of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Product category PC21 - Laboratory chemicals

Process categories see SECTION 16 for a complete list of uses for which an exposure scenario is provided as

an annex

Environmental release category ERC1 - Manufacture of substances

ERC2 - Formulation of preparations (mixtures)

ERC4 - Industrial use of processing aids in processes and products, not becoming part of

articles

ERC8a - Wide dispersive indoor use of processing aids in open systems

**Uses advised against** SU21 - Consumer uses: Private households (= general public = consumers); PC13 - Fuels.

REACH Annex XVII Restriction - refer to SECTION 15

## 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**

Acute oral toxicityCategory 3 (H301)Acute dermal toxicityCategory 3 (H311)Acute Inhalation Toxicity - VaporsCategory 3 (H331)Specific target organ toxicity - (single exposure)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

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

H370 - Causes damage to organs: Optic nerve, Central nervous system (CNS)

## **Precautionary Statements**

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

P240 - Ground and bond container and receiving equipment

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

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

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

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

#### 2.3. Other hazards

Substance is not considered to be persistent, bioaccumulative and toxic (PBT). Substance is not considered to be very persistent and very bioaccumulative (vPvB).

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

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

#### 3.1. Substances

Compone	nt CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Methyl alcol	nol 67-56-1	200-659-6	>95	Flam. Liq. 2 (H225) Acute Tox. 3 (H301)
				Acute Tox. 3 (H311)
				Acute Tox. 3 (H331) STOT SE 1 (H370)

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

REACH registration number	01-2119433307-44-0232
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Full text of Hazard Statements: see section 16

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

## 4.1. Description of first aid measures

**General Advice** Immediate medical attention is required. Show this safety data sheet to the doctor in

attendance.

**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 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.

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. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Remove all sources of ignition. No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable

instruments/apparatus. Avoid contact with skin.

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

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

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Symptoms may be delayed. **Notes to Physician** 

## **SECTION 5: FIREFIGHTING MEASURES**

## 5.1. 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

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

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

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

#### **Hazardous Combustion Products**

Carbon monoxide (CO), Formaldehyde.

## 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

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required. Ensure adequate ventilation. 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

Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. 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.

#### **Hygiene Measures**

When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

## 7.2. Conditions for safe storage, including any incompatibilities

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Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition.

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

## 7.3. Specific end use(s)

Use in laboratories

Flammables area.

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

#### 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 <sup>3</sup> 8 hr	TWA: 260 mg/m <sup>3</sup> 8 hr.
	WEL - STEL: 250 ppm	Skin	STEL: 600 ppm 15 min
	STEL; 333 mg/m <sup>3</sup> STEL		STEL: 780 mg/m <sup>3</sup> 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 (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Methyl alcohol		DNEL = 20mg/kg		DNEL = 20mg/kg
67-56-1 ( >95 )		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 ( >95 )	DNEL = 130mg/m <sup>3</sup>	DNEL = 130mg/m <sup>3</sup>	DNEL = 130mg/m <sup>3</sup>	DNEL = 130mg/m <sup>3</sup>

## **Predicted No Effect Concentration (PNEC)**

See values below.

	Component	Fresh water	Fresh water sediment		Microorganisms in sewage treatment	` • /
Ī	Methyl alcohol	PNEC = 20.8mg/L	PNEC = 77mg/kg	PNEC = 1540mg/L	PNEC = 100mg/L	PNEC = 100mg/kg
L	67-56-1 (>95)		sediment dw			soil dw

Component	Marine water	Marine water	Marine water	Food chain	Air
		sediment	intermittent		

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Methyl alcohol	PNEC = 2.08mg/L	PNEC = 7.7 mg/kg		
67-56-1 (>95)		sediment dw		

## 8.2. Exposure controls

#### **Engineering Measures**

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

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 Tight sealing safety goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	> 480 minutes	0.35 mm	Level 6	As tested under EN374-3 Determination of
Viton (R)	> 480 minutes	0.70 mm	EN 374	Resistance to Permeation by Chemicals
Neoprene gloves	< 60 minutes	0.45 mm		•
Nitrile rubber	< 30 minutes	0.38 mm		

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

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

141

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

**Environmental exposure controls** No information available.

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

## 9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance Colorless
Odor Alcohol-like
Odor Threshold No data available

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Melting Point/Range -98 °C / -144.4 °F
Softening Point No data available
Boiling Point/Range 64.7 °C / 148.5 °F
Flammability (liquid) Highly flammable

Flammability (solid,gas) Not applicable Liquid

Explosion Limits Lower 6 vol%

Upper 31 vol%

Flash Point 9.7 °C / 49.5 °F Method - CC (closed cup) Abel-Pensky (DIN

51755) Directive 84/449/EEC, A.9

@ 760 mmHg

On basis of test data

Autoignition Temperature

Decomposition Temperature
pH

Viscosity

455 °C / 851 °F
No data available
Not applicable
0.55 cP at 20 °C

Water Solubility Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component log Pow Methyl alcohol -0.74

Vapor Pressure 128 hPa @ 20 °C

Density / Specific Gravity 0.791

Bulk DensityNot applicableLiquidVapor Density1.11(Air = 1.0)

Particle characteristics Not applicable (liquid)

9.2. Other information

Molecular FormulaC H4 OMolecular Weight32.04VOC Content(%)100

Explosive Properties Not explosive Vapors may form explosive mixtures with air

 Evaporation Rate
 5.2 (ether = 1)

 Surface tension
 0.02255 N/m @ 20°C

**SECTION 10: STABILITY AND REACTIVITY** 

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

10.4. Conditions to avoid

Incompatible products. Heat, flames and sparks. Keep away from open flames, hot

surfaces and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Acid anhydrides. Acid chlorides. Strong bases.

Metals. Peroxides.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Formaldehyde.

**SECTION 11: TOXICOLOGICAL INFORMATION** 

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

#### **Product Information**

(a) acute toxicity;

Oral Category 3
Dermal Category 3
Inhalation Category 3

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

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

**Respiratory**Skin
Based on available data, the classification criteria are not met
Based on available data, the classification criteria are not met

	Component	Test method	Test species	Study result
Г	Methyl alcohol	OECD Test Guideline 406	guinea pig	non-sensitising
	67-56-1 ( >95 )	Guinea Pig Maximisation Test		
1		(GPMT)		

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Based on available data, the classification criteria are not met

L	Component	Test method	Test species / Duration	Study result
Γ	Methyl alcohol	OECD Test Guideline 416	Rat / Inhalation	NOAEC =
L	67-56-1 ( >95 )		2 Generation	1.3 mg/l (air)

**Developmental Effects**Component substance is listed on California Proposition 65 as a developmental hazard.

(h) STOT-single exposure; Category 1

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

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs None known.

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

Symptoms / effects,both acute and May cause blindness. Inhalation of high vapor concentrations may cause symptoms like

**delayed** headache, dizziness, tiredness, nausea and vomiting.

11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any

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known or suspected endocrine disruptors.

## **SECTION 12: ECOLOGICAL INFORMATION**

## 12.1. Toxicity Ecotoxicity effects

cotoxicity 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
ſ	Methyl alcohol	EC50 = 39000 mg/L 25 min	
۱	•	EC50 = 40000 mg/L 15 min	
		EC50 = 43000 mg/L 5 min	

## 12.2. Persistence and degradability Readily biodegradable

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

Component	Degradability
Methyl alcohol	DT50 ~ 17.2d
67-56-1 ( >95 )	>94% after 20d

#### **12.3. Bioaccumulative potential** Bioaccumulation is unlikely

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

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

Surface tension 0.02255 N/m @ 20°C

12.5. Results of PBT and vPvB

assessment

Substance is not considered to be persistent, bioaccumulative and toxic (PBT). Substance

is not considered to be very persistent and very bioaccumulative (vPvB).

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.

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**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.

## **SECTION 14: TRANSPORT INFORMATION**

## IMDG/IMO

14.1. UN number UN1230
14.2. UN proper shipping name METHANOL

14.3. Transport hazard class(es) 3 Subsidiary Hazard Class 6.1 14.4. Packing group II

## <u>ADR</u>

**14.1. UN number** UN1230 **14.2. UN proper shipping name** WETHANOL

14.3. Transport hazard class(es)3Subsidiary Hazard Class6.114.4. Packing groupII

## <u>IATA</u>

14.1. UN numberUN123014.2. UN proper shipping nameMETHANOL

14.3. Transport hazard class(es) 3
Subsidiary Hazard Class 6.1
14.4. Packing group II

14.5. Environmental hazards No hazards identified

**14.6. Special precautions for user** No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

## **SECTION 15: REGULATORY INFORMATION**

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

## International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Methyl alcohol	67-56-1	200-659-6	-	-	Х	X	KE-23193	X	Х
									,
Component	CAS No	TSCA	notific	nventory ation - Inactive	DSL	NDSL	AICS	NZIoC	PICCS

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Methyl alcohol 67-5		ACTIVE	Х	-	Х	Х	Х
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Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

## Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
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)	_

#### **REACH links**

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

## Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
		Qualifying Quantities for Major Accident	Qualifying Quantities for Safety Report
		Notification	Requirements
Methyl alcohol	67-56-1	500 tonne	5000 tonne

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 See table for values

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 t	he Switzerland - Ordinance on Switzerland - Ordinance of the
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	Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Incentive Taxes on Volatile Organic Compounds (OVOC)	Rotterdam Convention on the Prior Informed Consent Procedure
Methyl alcohol 67-56-1 ( >95 )	Prohibited and Restricted Substances	Group I	

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

## **SECTION 16: OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapor

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

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

ICAO/IATA - International Civil Aviation Organization/International Air

MARPOL - International Convention for the Prevention of Pollution from

**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

Ships ATE - Acute Toxicity Estimate

Transport Association

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 hvaiene.

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.

**Creation Date** 27-Apr-2009 **Revision Date** 04-Oct-2023 Not applicable. **Revision Summary** 

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**