

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

Revision Date 09-Feb-2024 Revision Number 13

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

1.1. Product identifier

Product Description: Methylated spirit mineralised

Cat No.: M/4350/PB16, M/4350/30, M/4350/16, M/4350/17, M/43

Synonyms None

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

Tel: 01509 231166

Chemtrec US: (800) 424-9300 Chemtrec EU: 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

Serious Eye Damage/Eye Irritation Category 2 (H319)

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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

H319 - Causes serious eye irritation

EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements

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

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear eye protection/ face protection

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

P337 + P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

Contains a known or suspected endocrine disruptor Contains a substance on the National Authorities Endocrine Disruptor Lists

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
Ethyl alcohol	64-17-5	200-578-6	90	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319)
Isopropyl alcohol	67-63-0	200-661-7	< 5	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336)
Methyl ethyl ketone	78-93-3	EEC No. 201-159-0	< 5	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336) (EUH066)
Denatonium benzoate	3734-33-6	EEC No. 223-095-2	<0.5	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)

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Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Ethyl alcohol	Eye Irrit. 2 :: C>=50%	-	-

Components	Reach Registration Number	
Ethanol	01-2119457610-43	
Propan-2-ol	01-2119457558-25	
Methyl ethyl ketone	01-2119457290-43	

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice If symptoms persist, call a physician.

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

symptoms occur.

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

protect themselves and prevent spread of contamination.

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

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: 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

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

Extremely flammable. Vapors may travel to source of ignition and flash back. Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

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

5.3. Advice for firefighters

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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

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

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 get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. 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

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.

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

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,

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Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Ethyl alcohol	TWA: 1000 ppm TWA; 1920		STEL: 1000 ppm 15 min
	mg/m³ TWA		
	WEL - STEL: 3000 ppm		
	STEL; 5760 mg/m ³ STEL		
Isopropyl alcohol	STEL: 500 ppm 15 min		TWA: 200 ppm 8 hr.
	STEL: 1250 mg/m ³ 15 min		STEL: 400 ppm 15 min
	TWA: 400 ppm 8 hr		Skin
	TWA: 999 mg/m ³ 8 hr		
Methyl ethyl ketone	STEL: 300 ppm 15 min	TWA: 200 ppm (8h)	TWA: 200 ppm 8 hr.
	STEL: 899 mg/m ³ 15 min	TWA: 600 mg/m ³ (8h)	TWA: 600 mg/m ³ 8 hr.
	TWA: 200 ppm 8 hr	STEL: 300 ppm (15min)	STEL: 300 ppm 15 min
	TWA: 600 mg/m ³ 8 hr	STEL: 900 mg/m ³ (15min)	STEL: 900 mg/m ³ 15 min
	Skin	, ,	Skin

Biological limit values

List source(s): **UK** - Biological Monitoring Guidance Values provided by the UK's Health and Safety Executive (HSE) Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended) and EH40/2005.

Component	United Kingdom	European Union
Methyl ethyl ketone	Butan-2-one: 70 µmol/L urine post shift	

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

See table for values

Component	Acute effects local (Oral)	Acute effects systemic (Oral)	Chronic effects local (Oral)	Chronic effects systemic (Oral)
Ethyl alcohol 64-17-5 (90)		DNEL = 87 mg/kg bw/d		

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Ethyl alcohol 64-17-5 (90)				DNEL = 343mg/kg bw/day
Isopropyl alcohol 67-63-0 (< 5)				DNEL = 888mg/kg bw/day
Methyl ethyl ketone 78-93-3 (< 5)				DNEL = 1161mg/kg bw/day
Denatonium benzoate 3734-33-6 (<0.5)				DNEL = 1.43mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Ethyl alcohol 64-17-5 (90)	DNEL = 1900mg/m ³			DNEL = 950mg/m ³
Isopropyl alcohol 67-63-0 (< 5)				DNEL = 500mg/m ³
Methyl ethyl ketone 78-93-3 (< 5)				DNEL = 600mg/m ³
Denatonium benzoate 3734-33-6 (<0.5)				DNEL = 4.99mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Isopropyl alcohol 67-63-0 (< 5)	PNEC = 140.9mg/L		PNEC = 140.9mg/L		PNEC = 28mg/kg soil dw
Methyl ethyl ketone 78-93-3 (< 5)	PNEC = 55.8mg/L		PNEC = 55.8mg/L	PNEC = 709mg/L	PNEC = 22.5mg/kg soil dw

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	Denatonium benzoate	PNEC = 0.1mg/L	PNEC = 25mg/kg	PNEC = 1mg/L	PNEC = 4.95mg/kg
	3734-33-6 (< 0.5)		sediment dw		soil dw

Component	Marine water	Marine water	Marine water	Food chain	Air
		sediment	intermittent		
Isopropyl alcohol	PNEC = 140.9mg/L	PNEC = 552mg/kg		PNEC = 160mg/kg	
67-63-0 (< 5)		sediment dw		food	
Methyl ethyl ketone	PNEC = 55.8mg/L	PNEC =		PNEC = 1000mg/kg	
78-93-3 (< 5)		284.7mg/kg		food	
		sediment dw			
Denatonium benzoate	PNEC = 10µg/L	PNEC = 2.5mg/kg	PNEC = 0.1mg/L		
3734-33-6 (<0.5)		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 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	-	EN 374	(minimum requirement)
	recommendations			

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.

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 or Organic gases and vapours filter Type A Brown conforming to EN14387

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

system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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Physical State Liquid

Appearance Purple
Odor Alcohol-like
Odor Threshold No data available
Melting Point/Range No data available
Softening Point No data available
Boiling Point/Range No information available

Flammability (liquid) Highly flammable On basis of test data

Flammability (solid,gas) Not applicable Liquid

Explosion Limits No data available

Flash Point 13 °C / 55.4 °F Method - No information available

Autoignition TemperatureNo data availableDecomposition TemperatureNo data availablepHNo information availableViscosityNo data available

Water Solubility Soluble

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Componentlog PowEthyl alcohol-0.32Isopropyl alcohol0.05Methyl ethyl ketone0.29Denatonium benzoate2.2

Vapor Pressure No data available Density / Specific Gravity 0.805 @ 20°C

Bulk DensityNot applicableLiquidVapor DensityNo data available(Air = 1.0)

Particle characteristics Not applicable (liquid)

9.2. Other information

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 ReactionsNone under normal processing.

10.4. Conditions to avoid

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

sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Acid anhydrides. Acid chlorides. Alkaline. Metals.

Ammonia.

10.6. Hazardous decomposition products

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information Product does not present an acute toxicity hazard based on known information

(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

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	LD50 = 10470 mg/kg	-	LC50 = 117-125 mg/l (4h)
	OECD 401 (Rat)		OECD 403 (rat)
	3450 mg/kg (Mouse)		20000 ppm/10H (rat)
Isopropyl alcohol	5045 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat)	72.6 mg/L (Rat)4 h
Methyl ethyl ketone	LD50 = 2483 mg/kg (Rat)	LD50 = 5000 mg/kg (Rabbit)	LC50 = 11700 ppm (Rat) 4 h
Denatonium benzoate	LD50 = 584 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	LC50 = 0.2 mg/L (Rat) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

No data available Respiratory No data available Skin

Component	Test method	Test species	Study result
Ethyl alcohol	Mouse Ear Swelling Test (MEST)	mouse	non-sensitising
64-17-5 (90)			
		mouse	non-sensitising
	OECD Test Guideline 429		_
	Local Lymph Node Assay		

(e) germ cell mutagenicity; No data available

Component	Test method	Test species	Study result
Ethyl alcohol	AMES test	in vitro	negative
64-17-5 (90)	OECD Test Guideline 471	Bacteria	_
	Gene cell mutation		
	OECD Test Guideline 476	in vitro	negative
		Mammalian	

(f) carcinogenicity; No data available

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

No data available (g) reproductive toxicity;

Component	Test method	Test species / Duration	Study result
Ethyl alcohol 64-17-5 (90)	OECD Test Guideline 416	Oral / mouse 2 Generation	NOAEL = 13.8 g/kg/day
04 17 0 (30)	OECD Test Guideline 414		
		Inhalation / Rat	NOAEC = 16000 ppm

(h) STOT-single exposure; No data available

Results / Target organs Central nervous system (CNS).

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No data available (i) STOT-repeated exposure;

No information available. **Target Organs**

No data available (j) aspiration hazard;

delayed

Symptoms / effects,both acute and Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness,

tiredness, nausea and vomiting.

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health

Contains a substance on the National Authorities Endocrine Disruptor Lists

Component	EU National Authorities Endocrine Disruptor Lists - Health
Methyl ethyl ketone 78-93-3 (< 5)	List II

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity **Ecotoxicity effects**

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

Component	Freshwater Fish	Water Flea	Freshwater Algae
Ethyl alcohol	Fathead minnow (Pimephales promelas) LC50 = 14200 mg/l/96h	EC50 = 9268 mg/L/48h EC50 = 10800 mg/L/24h	EC50 (72h) = 275 mg/l (Chlorella vulgaris)
Isopropyl alcohol	LC50: = 9640 mg/L, 96h flow-through (Pimephales promelas) LC50: > 1400000 μg/L, 96h (Lepomis macrochirus) LC50: = 11130 mg/L, 96h static (Pimephales promelas) LC50: = 10000000 μg/L, 96h (Daphnia)	13299 mg/L EC50 = 48 h 9714 mg/L EC50 = 24 h	EC50: > 1000 mg/L, 72h (Desmodesmus subspicatus) EC50: > 1000 mg/L, 96h (Desmodesmus subspicatus)
Methyl ethyl ketone	Lepomis macrochirus: LC50=3,22 g/L 96 h	EC50: = 5091 mg/L, 48h (Daphnia magna) EC50: 4025 - 6440 mg/L, 48h Static (Daphnia magna) EC50: > 520 mg/L, 48h (Daphnia magna)	

Component	Microtox	M-Factor
Ethyl alcohol	Photobacterium phosphoreum:EC50 = 34634	
	mg/L/30 min	
	Photobacterium phosphoreum:EC50 = 35470	
	mg/L/5 min	
Isopropyl alcohol	= 35390 mg/L EC50 Photobacterium phosphoreum	
	5 min	
Methyl ethyl ketone	EC50 = 3403 mg/L 30 min	
	EC50 = 3426 mg/L 5 min	

12.2. Persistence and degradability

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Persistence	Persistence is unlikely.	
	Component	Degradability
	Ethyl alcohol 64-17-5(90)	OECD 301E = 94%
	Methyl ethyl ketone 78-93-3 (< 5)	98% (28d)

Degradation in sewage treatment plant

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

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Ethyl alcohol	-0.32	No data available
Isopropyl alcohol	0.05	No data available
Methyl ethyl ketone	0.29	No data available
Denatonium benzoate	2.2	No data available

12.4. Mobility in soil The product is water soluble, and may spread in water systems . Will likely be mobile in the

environment due to its water solubility. Highly mobile in soils

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 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.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN numberUN117014.2. UN proper shipping nameEthanol solution

14.3. Transport hazard class(es)

3

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14.4. Packing group

ADR

14.1. UN number UN1170

14.2. UN proper shipping name Ethanol solution

14.3. Transport hazard class(es) 3 14.4. Packing group II

<u>IATA</u>

14.1. UN number UN1170

14.2. UN proper shipping name Ethanol solution

14.3. Transport hazard class(es) 3 14.4. Packing group II

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required.

II

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
Ethyl alcohol	64-17-5	200-578-6	-	-	X	X	KE-13217	X	Х
Isopropyl alcohol	67-63-0	200-661-7	-	-	Х	Χ	KE-29363	Х	Х
Methyl ethyl ketone	78-93-3	201-159-0	-	-	Х	X	KE-24094	X	Х
Denatonium benzoate	3734-33-6	223-095-2	-	-	Х	Х	KE-11775	Х	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Ethyl alcohol	64-17-5	X	ACTIVE ACTIVE	X	_	X	X	X
Isopropyl alcohol	67-63-0	X	ACTIVE	X	-	X	X	X
Methyl ethyl ketone	78-93-3	Х	ACTIVE	Х	-	Х	Х	Х
Denatonium benzoate	3734-33-6	X	ACTIVE	Х	-	Χ	Х	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)
Ethyl alcohol	64-17-5	-	-	-
Isopropyl alcohol	67-63-0	-	Use restricted. See item 75. (see link for restriction details)	-
Methyl ethyl ketone	78-93-3	-	Use restricted. See item 75. (see link for restriction	-

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			details)	
Denatonium benzoate	3734-33-6	-	-	-

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) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Ethyl alcohol	64-17-5	Not applicable	Not applicable
Isopropyl alcohol	67-63-0	Not applicable	Not applicable
Methyl ethyl ketone	78-93-3	Not applicable	Not applicable
Denatonium benzoate	3734-33-6	Not applicable	Not applicable

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

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 = 1 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Ethyl alcohol	WGK1	
Isopropyl alcohol	WGK1	
Methyl ethyl ketone	WGK1	
Denatonium benzoate	WGK2	

Component	France - INRS (Tables of occupational diseases)		
Ethyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84		
Isopropyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84		
Methyl ethyl ketone	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
Ethyl alcohol 64-17-5 (90)		Group I	
Isopropyl alcohol 67-63-0 (< 5)		Group I	
Methyl ethyl ketone 78-93-3 (< 5)		Group I	
Denatonium benzoate 3734-33-6 (<0.5)	Prohibited and Restricted Substances		

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15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

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

H319 - Causes serious eye irritation

EUH066 - Repeated exposure may cause skin dryness or cracking

H225 - Highly flammable liquid and vapor

H302 - Harmful if swallowed

H315 - Causes skin irritation

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

Legend

CAS - Chemical Abstracts Service

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

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

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

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.

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,

Methylated spirit mineralised

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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