SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Creation Date 16-Sep-2011 **Revision Date** 30-Nov-2024 **Revision Number** 4

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

1.1. Product identifier

Product Description: Methylamine, 2M in methanol
Cat No. : **H26889**
Molecular Formula C H5 N

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

Thermo Fisher (Kandel) GmbH
Erlenbachweg 2, 76870 Kandel, Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300

Swiss distributor - Fisher Scientific AG
Neuhofstrasse 11, CH 4153 Reinach
Tel: +41 (0) 56 618 41 11
https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html

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

customers in Switzerland:
Tox Info Suisse Emergency Number: **145 (24hr)**
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)
Chemtrec (24h) Toll-Free: 0800 564 402
Chemtrec Local: +41-43 508 20 11 (Zurich)

Poison Centre - Emergency information services

Ireland : National Poisons Information Centre (NPIC) -
01 809 2166 (8am-10pm, 7 days a week)
Malta : +356 2395 2000
Cyprus : +357 2240 5611

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Flammable liquids	Category 2 (H225)

Health hazards

Acute oral toxicity	Category 3 (H301)
Acute dermal toxicity	Category 3 (H311)
Acute Inhalation Toxicity - Vapors	Category 3 (H331)
Skin Corrosion/Irritation	Category 1 B (H314)
Serious Eye Damage/Eye Irritation	Category 1 (H318)
Specific target organ toxicity - (single exposure)	Category 1 (H370) Category 3 (H335)

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
H335 - May cause respiratory irritation
H370 - Causes damage to organs
H314 - Causes severe skin burns and eye damage
H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

Precautionary Statements
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
P280 - Wear protective gloves/protective clothing/eye 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
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

2.3. Other hazards

Lachrymator (substance which increases the flow of tears)
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 - Regulation (EC) No 1272/2008
Methanol	67-56-1	200-659-6	92-93	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)
Methylamine	74-89-5	EEC No. 200-820-0	7-8	Flam. liq. 1 (H224) Acute Tox. 4 (H302) Acute Tox; 4 (H332) Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Methanol	STOT Single Exp. 1 :: >= 10 STOT Single Exp. 2 :: 3 - < 10	-	-
Methylamine	STOT SE 3 :: C>=5%	-	-

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. 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.

Inhalation 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. Remove to fresh air. 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

Causes burns by all exposure routes. . Difficulty in breathing. 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: 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.

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
No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products
Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO_2), Thermal decomposition can lead to release of irritating gases and vapors.

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. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. 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

Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate

medical assistance. Use only under a chemical fume hood. Wear personal protective equipment/face protection. 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.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany)	Class 3
Switzerland - Storage of hazardous substances	Storage class - SC 3 https://www.kvu.ch/de/themen/stoffe-und-produkte https://www.kvu.ch/fr/themes/substances-et-produits https://www.kvu.ch/it/temi/sostanze-e-prodotti

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, Forth edition. Published 2020. **IRE -** 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
Methanol	TWA: 200 ppm 8 hr TWA: 260 mg/m³ 8 hr Skin	WEL - TWA: 200 ppm TWA; 266 mg/m³ TWA WEL - STEL: 250 ppm STEL; 333 mg/m³ STEL	TWA / VME: 200 ppm (8 heures). restrictive limit TWA / VME: 260 mg/m³ (8 heures). restrictive limit STEL / VLCT: 1000 ppm. restrictive limit: this value is not set by regulation and comes from a circular published by the Ministry of Labor. STEL / VLCT: 1300 mg/m³. restrictive limit: this value is not set by regulation and comes from a circular published by the Ministry of Labor. Peau	TWA: 200 ppm 8 uren TWA: 266 mg/m³ 8 uren STEL: 250 ppm 15 minuten STEL: 333 mg/m³ 15 minuten Huid	TWA / VLA-ED: 200 ppm (8 horas) TWA / VLA-ED: 266 mg/m³ (8 horas) Piel
Methylamine			STEL / VLCT: 10 ppm. STEL / VLCT: 12 mg/m³.	TWA: 5 ppm 8 uren TWA: 6.6 mg/m³ 8 uren STEL: 15 ppm 15 minuten STEL: 19 mg/m³ 15 minuten	STEL / VLA-EC: 15 ppm (15 minutos). STEL / VLA-EC: 19 mg/m³ (15 minutos). TWA / VLA-ED: 5 ppm (8 horas) TWA / VLA-ED: 6.5 mg/m³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Methanol	TWA: 200 ppm 8 ore. Time Weighted Average TWA: 260 mg/m³ 8 ore. Time Weighted Average Pelle	100 ppm TWA MAK; 130 mg/m³ TWA MAKSkin absorber	STEL: 250 ppm 15 minutos TWA: 200 ppm 8 horas TWA: 260 mg/m³ 8 horas Pele	huid TWA: 100 ppm 8 uren TWA: 133 mg/m³ 8 uren	TWA: 200 ppm 8 tunteina TWA: 270 mg/m³ 8 tunteina STEL: 250 ppm 15 minuutteina STEL: 330 mg/m³ 15 minuutteina Iho
Methylamine		TWA: 5 ppm (8 Stunden). AGW - ceiling factor 2; exposure factor 2 TWA: 6.4 mg/m³ (8 Stunden). AGW - ceiling factor 2; exposure factor 2 TWA: 5 ppm (8 Stunden). MAK an instantaneous value of 10 ppm corresponding to 13 mg/m³ should not be exceeded;even if the MAK value is adhered to, "odor-associated" symptoms cannot be ruled out in individual cases TWA: 6.4 mg/m³ (8 Stunden). MAK an instantaneous value of 10 ppm corresponding to 13 mg/m³ should not be exceeded;even if the MAK value is adhered to, "odor-associated" symptoms cannot be ruled out in individual cases Höhepunkt: 10 ppm Höhepunkt: 12.8 mg/m³	STEL: 15 ppm 15 minutos TWA: 5 ppm 8 horas		STEL: 10 ppm 15 minuutteina STEL: 13 mg/m³ 15 minuutteina

Component	Austria	Denmark	Switzerland	Poland	Norway
Methanol	Haut MAK-KZGW: 800 ppm 15 Minuten MAK-KZGW: 1040 mg/m³ 15 Minuten MAK-TMW: 200 ppm 8 Stunden MAK-TMW: 260 mg/m³ 8 Stunden	TWA: 200 ppm 8 timer TWA: 260 mg/m³ 8 timer STEL: 400 ppm 15 minutter STEL: 520 mg/m³ 15 minutter Hud	Haut/Peau STEL: 400 ppm 15 Minuten STEL: 520 mg/m³ 15 Minuten TWA: 200 ppm 8 Stunden TWA: 260 mg/m³ 8 Stunden	STEL: 300 mg/m³ 15 minutach TWA: 100 mg/m³ 8 godzinach	TWA: 100 ppm 8 timer TWA: 130 mg/m³ 8 timer STEL: 150 ppm 15 minutter. value calculated STEL: 162.5 mg/m³ 15 minutter. value calculated Hud
Methylamine	MAK-KZGW: 10 ppm 15 Minuten MAK-KZGW: 12 mg/m³ 15 Minuten MAK-TMW: 10 ppm 8 Stunden MAK-TMW: 12 mg/m³ 8 Stunden Ceiling: 10 ppm Ceiling: 12 mg/m³	TWA: 5 ppm 8 timer TWA: 6.4 mg/m³ 8 timer STEL: 10 ppm 15 minutter STEL: 12.8 mg/m³ 15 minutter Hud	STEL: 10 ppm 15 Minuten STEL: 13 mg/m³ 15 Minuten TWA: 10 ppm 8 Stunden TWA: 13 mg/m³ 8 Stunden	STEL: 15 mg/m³ 15 minutach TWA: 5 mg/m³ 8 godzinach	TWA: 10 ppm 8 timer TWA: 12 mg/m³ 8 timer STEL: 20 ppm 15 minutter. value calculated STEL: 18 mg/m³ 15 minutter. value calculated

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Methanol	TWA: 200 ppm TWA: 260.0 mg/m³ Skin notation	kože TWA-GVI: 200 ppm 8 satima.	TWA: 200 ppm 8 hr. TWA: 260 mg/m³ 8 hr. STEL: 600 ppm 15 min	Skin-potential for cutaneous absorption TWA: 200 ppm	TWA: 250 mg/m³ 8 hodinách. Potential for cutaneous

		TWA-GVI: 260 mg/m³ 8 satima.	STEL: 780 mg/m³ 15 min Skin	TWA: 260 mg/m³	absorption Ceiling: 1000 mg/m³
Methylamine	TWA: 12.0 mg/m³		TWA: 5 ppm 8 hr. TWA: 6 mg/m³ 8 hr. STEL: 15 ppm 15 min STEL: 19 mg/m³ 15 min		TWA: 10 mg/m³ 8 hodinách. Potential for cutaneous absorption Ceiling: 20 mg/m³

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Methanol	Nahk TWA: 200 ppm 8 tundides. TWA: 250 mg/m³ 8 tundides. STEL: 250 ppm 15 minutites. STEL: 350 mg/m³ 15 minutites.	Skin notation TWA: 200 ppm 8 hr TWA: 260 mg/m³ 8 hr	skin - potential for cutaneous absorption STEL: 250 ppm STEL: 325 mg/m³ TWA: 200 ppm TWA: 260 mg/m³	TWA: 260 mg/m³ 8 órában. AK TWA: 200 ppm 8 órában. AK lehetséges borön keresztüli felszívódás	TWA: 200 ppm 8 klukkustundum. TWA: 260 mg/m³ 8 klukkustundum. Skin notation Ceiling: 400 ppm Ceiling: 520 mg/m³
Methylamine	Nahk TWA: 10 ppm 8 tundides. TWA: 13 mg/m³ 8 tundides. STEL: 20 ppm 15 minutites. STEL: 25 mg/m³ 15 minutites.		TWA: 10 ppm TWA: 12 mg/m³		TWA: 5 ppm 8 klukkustundum. TWA: 6.4 mg/m³ 8 klukkustundum. Skin notation Ceiling: 10 ppm Ceiling: 12.8 mg/m³

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Methanol	skin - potential for cutaneous exposure TWA: 200 ppm TWA: 260 mg/m³	TWA: 200 ppm IPRD TWA: 260 mg/m³ IPRD Oda	Possibility of significant uptake through the skin TWA: 200 ppm 8 Stunden TWA: 260 mg/m³ 8 Stunden	possibility of significant uptake through the skin TWA: 200 ppm TWA: 260 mg/m³	Skin notation TWA: 200 ppm 8 ore TWA: 260 mg/m³ 8 ore
Methylamine		TWA: 10 ppm IPRD TWA: 13 mg/m³ IPRD Oda STEL: 20 ppm STEL: 25 mg/m³			TWA: 8 ppm 8 ore TWA: 10 mg/m³ 8 ore STEL: 12 ppm 15 minute STEL: 15 mg/m³ 15 minute

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Methanol	TWA: 5 mg/m³ 1250 Skin notation MAC: 15 mg/m³	Potential for cutaneous absorption TWA: 200 ppm TWA: 260 mg/m³	TWA: 200 ppm 8 urah TWA: 260 mg/m³ 8 urah Koža STEL: 800 ppm 15 minutah STEL: 1040 mg/m³ 15 minutah	Indicative STEL: 250 ppm 15 minuter Indicative STEL: 350 mg/m³ 15 minuter TLV: 200 ppm 8 timmar. NGV TLV: 250 mg/m³ 8 timmar. NGV Hud	Deri TWA: 200 ppm 8 saat TWA: 260 mg/m³ 8 saat
Methylamine	Skin notation MAC: 1 mg/m³	TWA: 10 ppm TWA: 13 mg/m³	TWA: 10 ppm 8 urah TWA: 13 mg/m³ 8 urah STEL: 10 ppm 15 minutah STEL: 13 mg/m³ 15 minutah	Indicative STEL: 20 ppm 15 minuter Indicative STEL: 25 mg/m³ 15 minuter TLV: 10 ppm 8 timmar. NGV TLV: 13 mg/m³ 8 timmar. NGV Hud	

Biological limit values

List source(s):

Component	European Union	United Kingdom	France	Spain	Germany
Methanol			Methanol: urine end of	Methanol: 15 mg/L urine	Methanol: 15 mg/L urine

			shift	end of shift	(end of shift) Methanol: 15 mg/L urine (for long-term exposures: at the end of the shift after several shifts)

Component	Italy	Finland	Denmark	Bulgaria	Romania
Methanol					Methanol: 6 mg/L urine end of shift

Component	Gibraltar	Latvia	Slovak Republic	Luxembourg	Turkey
Methanol			Methanol: 30 mg/L urine end of exposure or work shift Methanol: 30 mg/L urine after all work shifts for long-term exposure		

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours
MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography
MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

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)
Methanol 67-56-1 (92-93)		DNEL = 20mg/kg bw/day		DNEL = 20mg/kg bw/day
Methylamine 74-89-5 (7-8)				DNEL = 0.1mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Methanol 67-56-1 (92-93)	DNEL = 130mg/m³	DNEL = 130mg/m³	DNEL = 130mg/m³	DNEL = 130mg/m³
Methylamine 74-89-5 (7-8)			DNEL = 0.427mg/m³	DNEL = 0.72mg/m³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Methanol 67-56-1 (92-93)	PNEC = 20.8mg/L	PNEC = 77mg/kg sediment dw	PNEC = 1540mg/L	PNEC = 100mg/L	PNEC = 100mg/kg soil dw
Methylamine 74-89-5 (7-8)	PNEC = 0.016mg/L	PNEC = 0.776mg/kg sediment dw	PNEC = 0.016mg/L	PNEC = 0.1263mg/L	PNEC = 0.126mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air

Methanol 67-56-1 (92-93)	PNEC = 2.08mg/L	PNEC = 7.7mg/kg sediment dw			
Methylamine 74-89-5 (7-8)	PNEC = 0.0016mg/L	PNEC = 0.0776mg/kg sediment dw			

8.2. Exposure controls

Engineering Measures
Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. 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
Natural rubber Nitrile rubber Neoprene PVC	See manufacturers recommendations	-	EN 374	(minimum requirement)

Skin and body protection Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) 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. 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: Particulates filter conforming to EN 143 Ammonia and organic ammonia derivatives filter Type K Green

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 Clear
Odor No information available
Odor Threshold No data available

Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	40 °C / 104 °F	
Flammability (liquid)	Highly flammable	On basis of test data
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Flash Point	7 °C / 44.6 °F	**Method -** No information available
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
pH	No information available	
Viscosity	No data available	
Water Solubility	Soluble	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	**log Pow**	
Methanol	-0.74	
Methylamine	-0.713	
Vapor Pressure	2.07 Psi @ 20 °C	
Density / Specific Gravity	0.785	
Bulk Density	Not applicable	Liquid
Vapor Density	No data available	(Air = 1.0)
Particle characteristics	(liquid) Not applicable	

9.2. Other information

Molecular Formula	C H5 N
Molecular Weight	31.06
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

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

10.5. Incompatible materials

Acids. Acid anhydrides. Acid chlorides. Metals. Reducing Agent.

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO_2). Thermal decomposition can lead to release of irritating gases and vapors.

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

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h
Methylamine	698 mg/kg (Rat)	-	2.9 mg/L/4h (Rat)

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory	No data available
Skin	No data available

Component	Test method	Test species	Study result
Methanol 67-56-1 (92-93)	OECD Test Guideline 406 Guinea Pig Maximisation Test (GPMT)	guinea pig	non-sensitising

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

Component	Test method	Test species / Duration	Study result
Methanol 67-56-1 (92-93)	OECD Test Guideline 416	Rat / Inhalation 2 Generation	NOAEC = 1.3 mg/l (air)

(h) STOT-single exposure; Category 1
Category 3

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

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

Symptoms / effects,both acute and delayed 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. 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. This product does not contain any known or suspected endocrine disruptors.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity effects Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Do not empty into drains.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Methanol	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 > 10000 mg/L 24h	
Methylamine		EC50: = 163 mg/L, 48h (Daphnia magna) EC50: 147 - 180 mg/L, 48h Static (Daphnia magna)	

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

12.2. Persistence and degradability

Persistence Persistence is unlikely, based on information available.

Component	Degradability
Methanol 67-56-1 (92-93)	DT50 ~ 17.2d >94% after 20d

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Methanol	-0.74	<10 dimensionless
Methylamine	-0.713	2860 - 6910 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

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 This product does not contain any known or suspected substance

Ozone Depletion Potential 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.
Switzerland - Waste Ordinance	Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600 https://www.fedlex.admin.ch/eli/cc/2015/891/en

Section 14: Transport information

IMDG/IMO

14.1. UN number	UN3286
14.2. UN proper shipping name	Flammable liquid, toxic, corrosive, n.o.s.
Technical Shipping Name	Methyl alcohol, Methylamine
14.3. Transport hazard class(es)	3
Subsidiary Hazard Class	6.1, 8
14.4. Packing group	II

ADR

14.1. UN number	UN3286
14.2. UN proper shipping name	Flammable liquid, toxic, corrosive, n.o.s.
Technical Shipping Name	Methyl alcohol, Methylamine
14.3. Transport hazard class(es)	3
Subsidiary Hazard Class	6.1, 8
14.4. Packing group	II

IATA

14.1. UN number	UN3286
14.2. UN proper shipping name	Flammable liquid, toxic, corrosive, n.o.s.
Technical Shipping Name	Methyl alcohol, Methylamine
14.3. Transport hazard class(es)	3
Subsidiary Hazard Class	6.1, 8
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	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
Methanol	67-56-1	200-659-6	-	-	X	X	KE-23193	X	X
Methylamine	74-89-5	200-820-0	-	-	X	X	KE-23421	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Methanol	67-56-1	X	ACTIVE	X	-	X	X	X
Methylamine	74-89-5	X	ACTIVE	X	-	X	X	X

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)
Methanol	67-56-1	-	Use restricted. See entry 69. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	-
Methylamine	74-89-5	-	Use restricted. See entry 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) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Methanol	67-56-1	500 tonne	5000 tonne
Methylamine	74-89-5	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 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
Methanol	WGK 2	Class I : 20 mg/m³ (Massenkonzentration)
Methylamine	WGK1	Class I : 20 mg/m³ (Massenkonzentration)

Component	France - INRS (Tables of occupational diseases)
Methanol	Tableaux des maladies professionnelles (TMP) - RG 84
Methylamine	Tableaux des maladies professionnelles (TMP) - RG 49,RG 49bis

Swiss Regulations
Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).
Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

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
Methanol 67-56-1 (92-93)	Prohibited and Restricted Substances	Group I	

15.2. Chemical safety assessment

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

Section 16: Other information

Full text of H-Statements referred to under sections 2 and 3
H224 - Extremely flammable liquid and vapor
H225 - Highly flammable liquid and vapor
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H370 - Causes damage to organs
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H335 - May cause respiratory irritation

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit
TWA - Time Weighted Average
ACGIH - American Conference of Governmental Industrial Hygienists
IARC - International Agency for Research on Cancer
DNEL - Derived No Effect Level
Predicted No Effect Concentration (PNEC)
RPE - Respiratory Protective Equipment
LD50 - Lethal Dose 50%
LC50 - Lethal Concentration 50%
EC50 - Effective Concentration 50%
NOEC - No Observed Effect Concentration
POW - Partition coefficient Octanol:Water
PBT - Persistent, Bioaccumulative, Toxic
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
MARPOL - International Convention for the Prevention of Pollution from Ships
OECD - Organisation for Economic Co-operation and Development
ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
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 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.

Prepared By	Health, Safety and Environmental Department
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This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

Disclaimer

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End of Safety Data Sheet