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Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) 235000

Product Name Permacav 50

Synonyms None

Pure substance/mixture Mixture

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

Recommended use Embalming chemical

Uses advised against Use only for intended applications

1.3. Details of the supplier of the safety data sheet

<u>Manufacturer</u>	<u>Supplier</u>
The MazWell Group Ltd. Units 11/14-15 Ardglan Industrial Estate, Whitchurch, Hampshire, RG28 7BB, United Kingdom +44 (0)1256-893883 +44 (0)1256-893868 enquiries@themazwellgroup.com	Medenta GmbH Huckrieden Esch 9, 49549 Ladbergen. Germany (05485) 2020 info@medenta.de

For further information, please contact

1.4. Emergency telephone number

Emergency telephone No information available

Emergency telephone - §45 - (EC)1272/2008
Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 3 - (H301)
Acute toxicity - Dermal	Category 3 - (H311)
Acute toxicity - Inhalation (Dusts/Mists)	Category 3 - (H331)
Skin corrosion/irritation	Category 1 Sub-category B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitisation	Category 1 - (H317)
Germ cell mutagenicity	Category 2 - (H341)

Carcinogenicity	Category 1B - (H350)
Specific target organ toxicity — single exposure	Category 1 Category 3 - (H370, H335)
Flammable liquids	Category 3 - (H226)

2.2. Label elements

Contains Formaldehyde, Methanol



Signal word

Danger

Hazard statements

H301 - Toxic if swallowed
 H311 - Toxic in contact with skin
 H314 - Causes severe skin burns and eye damage
 H317 - May cause an allergic skin reaction
 H331 - Toxic if inhaled
 H335 - May cause respiratory irritation
 H341 - Suspected of causing genetic defects
 H350 - May cause cancer
 H370 - Causes damage to organs
 H226 - Flammable liquid and vapour

Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 P260 - Do not breathe dust/fume/gas/mist/vapours/spray
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER or doctor
 P331 - Do NOT induce vomiting
 P370 + P378 - In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish
 P391 - Collect spillage
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Additional information

This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

2.3. Other hazards

No information available.

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Formaldehyde 50-00-0	20-50	No data available	200-001-8	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 1B (H350)	Eye Irrit. 2 :: 5%≤C<25% Skin Corr. 1B :: C≥25% Skin Irrit. 2 :: 5%≤C<25% Skin Sens. 1 :: C≥0.2% STOT SE 3 :: C≥5%	-	-
Methanol 67-56-1	20-<50	No data available	200-659-6	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370) Flam. Liq. 2 (H225)	STOT SE 1 :: C≥10% STOT SE 2 :: 3%≤C<10%	-	-

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE_{mix}) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Formaldehyde 50-00-0	100	2000	No data available	No data available	463
Methanol 67-56-1	100	300	No data available	3	No data available

This product does not contain candidate substances of very high concern at a concentration ≥0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. 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. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Immediate medical attention is required.

Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Remove all sources of ignition. 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. See section 8 for more information. Avoid contact with skin, eyes or clothing. 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. Do not breathe vapour or mist.

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

Symptoms	Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness and difficulty breathing. Burning sensation. Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitisation in susceptible persons. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours. Product is or contains a sensitizer. May cause sensitisation by skin contact.
Hazardous combustion products	Hydrogen. Formaldehyde. Carbon oxides.

5.3. Advice for firefighters

Specific/special fire-fighting measures	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.
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Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Attention! Corrosive material. Do not breathe vapour or mist.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Do not breathe vapour or mist.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Do not breathe vapour or mist.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Protect from moisture. Store away from other materials.

7.3. Specific end use(s)

Specific use(s).

The identified uses for this product are detailed in Section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Formaldehyde 50-00-0	TWA: 0.37 mg/m ³ TWA: 0.3 ppm * STEL: 0.74 mg/m ³ STEL: 0.6 ppm	TWA: 0.3 ppm TWA: 0.37 mg/m ³ STEL 0.6 ppm STEL 0.74 mg/m ³ Skin sensitizer	-	STEL: 2.0 mg/m ³ Skin Sensitisation TWA: 1.0 mg/m ³	TWA: 0.3 ppm TWA: 0.37 mg/m ³ TWA: 0.5 ppm TWA: 0.62 mg/m ³ STEL: 0.6 ppm STEL: 0.74 mg/m ³ Skin Sensitisation
Methanol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ *	TWA: 200 ppm TWA: 260 mg/m ³ STEL 800 ppm STEL 1040 mg/m ³ H*	TWA: 200 ppm TWA: 266 mg/m ³ STEL: 250 ppm STEL: 333 mg/m ³ D*	TWA: 200 ppm TWA: 260.0 mg/m ³ K*	TWA: 200 ppm TWA: 260 mg/m ³ *
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Formaldehyde 50-00-0	-	TWA: 0.5 mg/m ³ Ceiling: 1 mg/m ³ * Sensitizer	Ceiling: 0.3 ppm Ceiling: 0.4 mg/m ³	TWA: 0.5 ppm TWA: 0.6 mg/m ³ STEL: 1 ppm STEL: 1.2 mg/m ³	TWA: 0.3 ppm TWA: 0.37 mg/m ³ STEL: 0.6 ppm STEL: 0.74 mg/m ³
Methanol 67-56-1	* TWA: 200 ppm TWA: 260 mg/m ³	TWA: 250 mg/m ³ Ceiling: 1000 mg/m ³ D*	TWA: 200 ppm TWA: 260 mg/m ³ H*	TWA: 200 ppm TWA: 250 mg/m ³ STEL: 250 ppm STEL: 350 mg/m ³ A*	TWA: 200 ppm TWA: 270 mg/m ³ STEL: 250 ppm STEL: 330 mg/m ³ iho*
Chemical name	France	Germany	Germany MAK	Greece	Hungary
Formaldehyde 50-00-0	TWA: 0.5 ppm STEL: 1 ppm	TWA: 0.3 ppm TWA: 0.37 mg/m ³	TWA: 0.3 ppm TWA: 0.37 mg/m ³ Peak: 0.6 ppm Peak: 0.74 mg/m ³ skin sensitizer	TWA: 0.3 ppm TWA: 0.37 mg/m ³ STEL: 0.6 ppm STEL: 0.74 mg/m ³ Skin sensitization	TWA: 0.6 mg/m ³ STEL: 0.6 mg/m ³ *
Methanol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 1000 ppm STEL: 1300 mg/m ³ *	TWA: 100 ppm TWA: 130 mg/m ³ H*	TWA: 100 ppm TWA: 130 mg/m ³ Peak: 200 ppm Peak: 260 mg/m ³ *	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ *	TWA: 260 mg/m ³ b*
Chemical name	Ireland	Italy	Italy REL	Latvia	Lithuania
Formaldehyde 50-00-0	TWA: 0.3 ppm TWA: 0.5 ppm	TWA: 0.37 mg/m ³ TWA: 0.3 ppm	STEL: 0.3 ppm STEL: 0.37 mg/m ³	TWA: 0.5 mg/m ³	Sensitizer TWA: 0.3 ppm

	TWA: 0.37 mg/m ³ TWA: 0.62 mg/m ³ STEL: 0.6 ppm STEL: 0.738 mg/m ³ STEL: 0.62 mg/m ³ Sensitizer	TWA: 0.62 mg/m ³ TWA: 0.5 ppm STEL: 0.74 mg/m ³ STEL: 0.6 mg/m ³ pelle*			TWA: 0.37 mg/m ³ TWA: 0.62 mg/m ³ TWA: 0.5 ppm STEL: 0.74 mg/m ³ STEL: 0.6 ppm
Methanol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 600 ppm STEL: 780 mg/m ³ Sk*	TWA: 200 ppm TWA: 260 mg/m ³ cute*	TWA: 200 ppm TWA: 262 mg/m ³ STEL: 250 ppm STEL: 328 mg/m ³ cute*	TWA: 200 ppm TWA: 260 mg/m ³ Ada*	O* TWA: 200 ppm TWA: 260 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Formaldehyde 50-00-0	-	-	TWA: 0.15 mg/m ³ STEL: 0.5 mg/m ³	TWA: 0.5 ppm TWA: 0.6 mg/m ³ Ceiling: 1 ppm Ceiling: 1.2 mg/m ³	Skin Sensitisation STEL: 0.74 mg/m ³ TWA: 0.37 mg/m ³ *
Methanol 67-56-1	Peau* TWA: 200 ppm TWA: 260 mg/m ³	skin* TWA: 200 ppm TWA: 260 mg/m ³	TWA: 133 mg/m ³ H*	TWA: 100 ppm TWA: 130 mg/m ³ STEL: 150 ppm STEL: 162.5 mg/m ³ H*	STEL: 300 mg/m ³ TWA: 100 mg/m ³ Prohibited - substances or mixtures containing Methanol in weight concentration >3%;e except fuels used in the model building, powerboating, fuel cells and biofuels skóra*
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Formaldehyde 50-00-0	TWA: 0.3 ppm TWA: 0.37 mg/m ³ TWA: 0.62 mg/m ³ TWA: 0.5 ppm STEL: 0.6 ppm STEL: 0.74 mg/m ³ Ceiling: 0.3 ppm Sensitizer dermal	TWA: 1 ppm TWA: 1.2 mg/m ³ STEL: 2 ppm STEL: 3 mg/m ³	TWA: 0.3 ppm TWA: 0.37 mg/m ³ Sensitizer Ceiling: 0.74 mg/m ³	TWA: 0.62 mg/m ³ TWA: 0.5 ppm TWA: 0.37 mg/m ³ TWA: 0.3 ppm STEL: 0.6 ppm STEL: 0.74 mg/m ³ *	TWA: 0.3 ppm TWA: 0.37 mg/m ³ STEL: 0.6 ppm STEL: 0.74 mg/m ³ sensitizer
Methanol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm Cutânea*	TWA: 200 ppm TWA: 260 mg/m ³ P*	TWA: 200 ppm TWA: 260 mg/m ³ K*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 800 ppm STEL: 1040 mg/m ³ K*	TWA: 200 ppm TWA: 266 mg/m ³ via dérmica*
Chemical name	Sweden		Switzerland	United Kingdom	
Formaldehyde 50-00-0	NGV: 0.3 ppm NGV: 0.37 mg/m ³ Bindande KGV: 0.6 ppm Bindande KGV: 0.74 mg/m ³ *		TWA: 0.3 ppm TWA: 0.37 mg/m ³ STEL: 0.6 ppm STEL: 0.74 mg/m ³	TWA: 2 ppm TWA: 2.5 mg/m ³ STEL: 2 ppm STEL: 2.5 mg/m ³	
Methanol 67-56-1	NGV: 200 ppm NGV: 250 mg/m ³ Vägledande KGV: 250 ppm Vägledande KGV: 350 mg/m ³ H*		TWA: 200 ppm TWA: 260 mg/m ³ STEL: 400 ppm STEL: 520 mg/m ³ H*	TWA: 200 ppm TWA: 266 mg/m ³ STEL: 250 ppm STEL: 333 mg/m ³ Sk*	

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Methanol 67-56-1	-	-	-	7.0 mg/g Creatinine - urine (Methanol) - at the end of the	0.47 mmol/L (urine - Methanol end of shift)

Chemical name	Denmark	Finland	France	Germany	Germany
Methanol 67-56-1	-	-	15 mg/L - urine (Methanol) - end of shift	work shift 15 mg/L (urine - Methanol end of shift) 15 mg/L (urine - Methanol for long-term exposures: at the end of the shift after several shifts) 15 mg/L - BAT (for long-term exposures: at the end of the shift after several shifts) urine 15 mg/L - BAT (end of exposure or end of shift) urine	15 mg/L (urine - Methanol end of shift) 15 mg/L (urine - Methanol for long-term exposures: at the end of the shift after several shifts)
Chemical name	Hungary	Ireland	Italy	Italy REL	Italy REL
Methanol 67-56-1	30 mg/L (urine - Methanol end of shift) 940 µmol/L (urine - Methanol end of shift)	15 mg/L (urine - Methanol end of shift)	-	15 mg/L - urine (Methanol) - end of shift	
Chemical name	Latvia	Luxembourg	Romania	Slovakia	Slovakia
Methanol 67-56-1	-	-	6 mg/L - urine (Methanol) - end of shift	30 mg/L (urine - Methanol end of exposure or work shift) 30 mg/L (urine - Methanol after all work shifts)	
Chemical name	Slovenia	Spain	Switzerland	United Kingdom	United Kingdom
Methanol 67-56-1	15 mg/L - urine (Methanol) - at the end of the work shift; for long-term exposure: at the end of the work shift after several consecutive workdays	15 mg/L (urine - Methanol end of shift)	30 mg/L (urine - Methanol end of shift, and after several shifts (for long-term exposures))	-	

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Personal protective equipment

Eye/face protection Eye protection must conform to standard EN 166. Tight sealing safety goggles. Face protection shield.

Hand protection Gloves must conform to standard EN 374. Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. (EN ISO 6529). Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Do not breathe vapour or mist.
Environmental exposure controls	Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid
Physical state	Liquid
Colour	Light green
Odour	Pungent
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point		No data available
Initial boiling point and boiling range	79 - 82 °C	@ 760 mmHg
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits	47%	
Lower flammability or explosive limits	7%	
Flash point	40 °C	CC (closed cup)
Autoignition temperature	423.89	No data available
Decomposition temperature		No data available
pH		No data available
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Water solubility	Soluble in water	
Solubility(ies)		No data available
Partition coefficient		No data available
Vapour pressure	79 mmHg	@ 20 °C
Relative density	1.030 - 1.045	@20°C
Bulk density		No data available
Liquid Density		No data available
Vapour density	>1	No data available
Particle characteristics		
Particle Size		No data available
Particle Size Distribution		No data available

9.2. Other information

9.2.1. Information with regards to physical hazard classes

Not applicable	
Explosive properties	Not an explosive
Oxidising properties	Not an oxidiser

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity None under normal use conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation Hazardous polymerisation may occur.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Exposure to air or moisture over prolonged periods. Excessive heat. Protect from direct sunlight.

10.5. Incompatible materials

Incompatible materials Acids. Bases. Oxidising agent. Nitriles. Isocyanates. Magnesium.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Hydrogen. Formaldehyde.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation	Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Toxic by inhalation. May cause irritation of respiratory tract.
Eye contact	Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.
Skin contact	Corrosive. (based on components). Causes burns. May cause sensitisation by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Toxic in contact with skin.
Ingestion	Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains

may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes. Hives. Difficulty in breathing.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral)	112.50 mg/kg
ATEmix (dermal)	337.60 mg/kg
ATEmix (inhalation-gas)	1,461.50 ppm
ATEmix (inhalation-dust/mist)	0.564 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Formaldehyde	= 100 mg/kg (Rat)	> 2000 mg/kg (Rat)	< 463 ppm (Rat) 4 h
Methanol	= 100 mg/kg	= 300 mg/kg	= 22500 ppm (Rat) 8 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. Causes burns.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.
Respiratory or skin sensitisation	May cause sensitisation by skin contact.
Germ cell mutagenicity	Contains a known or suspected mutagen. Classification based on data available for ingredients. Suspected of causing genetic defects.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

Chemical name	European Union
Formaldehyde	Muta. 2

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

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

Chemical name	European Union
Formaldehyde	Carc. 1B

Reproductive toxicity No information available.

STOT - single exposure Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs if swallowed. Causes damage to organs in contact with skin. May cause respiratory irritation.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Formaldehyde 50-00-0	EC50 3.48 mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50: 6.7mg/L (96h, <i>Morone saxatilis</i>)	-	LC50: 5.8 mg/L (48h, <i>Daphnia magna</i>)
Methanol 67-56-1	-	LC50: =28200mg/L (96h, <i>Pimephales promelas</i>) LC50: >100mg/L (96h, <i>Pimephales promelas</i>) LC50: 19500 - 20700mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 18 - 20mL/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 13500 - 17600mg/L (96h, <i>Lepomis macrochirus</i>)	-	-

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Formaldehyde	0.35
Methanol	-0.77

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Formaldehyde 50-00-0	The substance is not PBT / vPvB PBT assessment does not apply
Methanol 67-56-1	The substance is not PBT / vPvB PBT assessment does not apply Further information relevant for the PBT assessment is necessary

12.6. Endocrine disrupting properties

Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

Waste codes / waste designations according to EWC / AVV According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG

14.1 UN number or ID number UN3286
 14.2 UN proper shipping name FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (Formaldehyde, Methanol)
 14.3 Transport hazard class(es) 3
 Subsidiary hazard class 6.1, 8
 14.4 Packing group III
 Description UN3286, FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.(Formaldehyde, Methanol), 3 (6.1, 8), III
 14.5 Environmental hazards Not applicable
 14.6 Special Precautions for Users
 Special Provisions 274
 EmS-No F-E, S-C
 14.7 Maritime transport in bulk according to IMO instruments No information available

RID

14.1 UN number UN3286
 14.2 UN proper shipping name FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (Formaldehyde, Methanol)
 14.3 Transport hazard class(es) 3
 Subsidiary hazard class 6.1, 8
 14.4 Packing group III
 Description UN3286, FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.(Formaldehyde, Methanol), 3

	(6.1, 8), III
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None
Classification code	FTC

ADR

14.1 UN number or ID number	UN3286
14.2 UN proper shipping name	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (Formaldehyde, Methanol)
14.3 Transport hazard class(es)	3
Subsidiary class	6.1, 8
14.4 Packing group	III
Description	UN3286, FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.(Formaldehyde, Methanol), 3 (6.1, 8), III
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	274
Classification code	FTC
Tunnel restriction code	(D/E)

IATA

14.1 UN number or ID number	UN3286
14.2 UN proper shipping name	Flammable liquid, toxic, corrosive, n.o.s. (Formaldehyde, Methanol)
14.3 Transport hazard class(es)	3
Subsidiary hazard class	6.1, 8
14.4 Packing group	III
Description	UN3286, Flammable liquid, toxic, corrosive, n.o.s.(Formaldehyde, Methanol), 3 (6.1, 8), III
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None
ERG Code	3CP
Note:	None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number
Formaldehyde 50-00-0	RG 43
Methanol 67-56-1	RG 84

Germany

Water hazard class (WGK) strongly hazardous to water (WGK 3)

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Carcinogens	Netherlands - List of Reproductive Toxins
Formaldehyde	Present	-	-

European Union

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.

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Formaldehyde - 50-00-0	72. 28. 75.	
Methanol - 67-56-1	69.	

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

H2 - ACUTE TOXIC

H3 - STOT SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

Named dangerous substances per Seveso Directive (2012/18/EU)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Formaldehyde - 50-00-0	5	50
Methanol - 67-56-1	500	5000

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

EU - Biocidal Product Regulation ((EU) 528/2012)

Chemical name	EU - Biocidal Product Regulation ((EU) 528/2012)
Formaldehyde - 50-00-0	001 Product type 22 (200-001-8)

International Inventories

Contact supplier for inventory compliance status

15.2. Chemical safety assessment**Chemical Safety Report**

No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H225 - Highly flammable liquid and vapour

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H331 - Toxic if inhaled
 H341 - Suspected of causing genetic defects
 H350 - May cause cancer
 H370 - Causes damage to organs

Legend

ATE: Acute Toxicity Estimate
 SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value * Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet