



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance/preparation	Methanol
Use of the substance/preparation	Industrial use
Version No.	02
Revision date	12-June-2009
Product code	534-064048, 534-125233
Manufacturer/Supplier	KMG ITALIA S.r.l. Via Umbria 4 20098 San Giuliano Milanese (MI) Italy Phone no.: +39 02 98838.1 e-mail: prodinfo.europe@kmgchemicals.com Emergency telephone (001) 760-476-3961

2. HAZARDS IDENTIFICATION

This preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification	F; R11 T; R23/24/25-39/23/24/25
Physical hazards	Highly flammable.
Health hazards	Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Prolonged exposure may cause chronic effects.
Environmental hazards	Not classified as an environmental hazard.
Specific hazards	Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Main symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Narcosis. Behavioural changes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent	EC-No.	Classification
Methanol	67-56-1	90 - 100	200-659-6	F; R11 T; R23/24/25-39/23/24/25

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The full text for all R-phrases is displayed in Section 16.

4. FIRST-AID MEASURES

Inhalation	Immediately call a poison control center or doctor for treatment advise. Move person to fresh air. If breathing is difficult, give oxygen. If breathing has ceased, start mouth-to-mouth artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin at least 15 minutes with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Immediately call a poison control center or doctor for treatment advise. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless told to do so by a poison control center or doctor.
General advice	In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Foam. Dry chemical. Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons	Do not use a solid water stream as it may scatter and spread fire.
Unusual fire & explosion hazards	Flammable by OSHA criteria. Containers may explode when heated. Runoff to sewer may cause fire or explosion hazard.
Specific hazards	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment for fire-fighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out. In case of fire and/or explosion do not breathe fumes. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Containment procedures	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Personal precautions	Use Personal Protective Equipment recommended in Section 8 of the MSDS. Local authorities should be advised if significant spillages cannot be contained. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for cleaning up	Should not be released into the environment. Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Absorb spill with vermiculite or other inert material. Clean contaminated surface thoroughly. Avoid dust formation. After removal flush contaminated area thoroughly with water. Never return spills in original containers for re-use.

7. HANDLING AND STORAGE

Handling	Use Personal Protective Equipment recommended in section 8 of the MSDS. Handle and open container with care. Use only with adequate ventilation. Avoid prolonged exposure. Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Wash thoroughly after handling.
Storage	Keep in a well-ventilated place. Keep container tightly closed. Keep this material away from food, drink and animal feed. Keep out of the reach of children. Use care in handling/storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

United Kingdom

Components

	Type	Value
Methanol (67-56-1)	STEL	333 mg/m ³
		250 ppm
	TWA	266 mg/m ³
		200 ppm

Exposure controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Explosion proof exhaust ventilation should be used. Use explosion-proof equipment.
--------------------------	---

Occupational exposure controls

Respiratory protection	Do not breathe dust/fume/gas/mist/vapors/spray. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.
Hand protection	Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Eye protection	Do not get this material in contact with eyes. Wear face shield if there is risk of splashes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Wear approved safety glasses or goggles.
Skin and body protection	Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Protective shoes or boots. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the Personal Protective Equipment manufacturer.
Hygiene measures	When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Remove and isolate contaminated clothing and shoes. Handle in accordance with good industrial hygiene and safety practices. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless liquid.
Physical state	Liquid.
Form	Liquid.
Colour	Colourless.
Odour	Characteristic. Pungent.
Odour threshold	Not available.
pH	Not available.
Boiling point	64.55 °C (148.2 °F)
Flash point	11 °C (51.8 °F)
Flammability	Not available.
Flammability limits in air, upper, % by volume	36.5 % v/v
Flammability limits in air, lower, % by volume	6 % v/v
Vapour pressure	97.23 mmHg
Relative density	Not available.
Solubility (water)	Completely soluble
Partition coefficient (n-octanol/water)	Not available.
Viscosity	Not available.
Vapour density	1.11 (air=1.0)
Evaporation rate	Not available.
Melting point	-97.72 °C (-143.9 °F)
Freezing point	Not available.
Auto-ignition temperature	Not available.
Molecular weight	32.04 g/mol
Molecular formula	C3H6O
Density	0.7915 g/cm ³

10. STABILITY AND REACTIVITY

Conditions to avoid	Heat, flames and sparks.
Hazardous decomposition products	Carbon monoxide.
Stability	Stable at normal conditions.
Materials to avoid	Oxidizing agents.
Hazardous polymerisation	Hazardous polymerisation does not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Components

Methanol (67-56-1)

Test results

Acute Dermal LD50 Rabbit: 15800 mg/kg

Acute Inhalation LC50 Rat: 87.5 mg/l 6 Hours

Acute Oral LD50 Rat: 5628 mg/kg

Acute toxicity

Toxic by inhalation, in contact with skin and if swallowed.

Methanol

1297 Version No.: 02 Revision date: 12-June-2009 Print Date: 12-June-2009

SDS UK

3 / 5

Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Chronic toxicity	Prolonged inhalation may be harmful.
Sensitisation	Not a skin sensitiser.
Carcinogenicity	Not available.
Mutagenicity	Not available.
Reproductivity	Not available.
Epidemiology	Not available.
Local effects	Toxic by inhalation, in contact with skin and if swallowed.
Further information	Danger of very serious irreversible effects. Symptoms may be delayed.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components	Test results
Methanol (67-56-1)	EC50 Water flea (Daphnia magna): > 10000 mg/l 48 Hours LC50 Fathead minnow (Pimephales promelas): > 100 mg/l 96 Hours

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Bioaccumulation	Not available.
Mobility	Not available.

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Dispose of this material and its container to hazardous or special waste collection point. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.
EU wastecodes	07 01 04*

14. TRANSPORT INFORMATION

ADR

UN Number	1230
Proper shipping name	Methanol
Hazard class	3
Packing group	II
Labels required	3
	+6.1
Hazard ID	336
Item	FT1
Transport Category	2

IATA

UN Number	1230
Proper shipping name	Methanol
Hazard class	3
Subsidiary hazard class	6.1
Packing group	II

IMDG

UN Number	1230
Proper shipping name	Methanol
Hazard class	3
Subsidiary hazard class	6.1
Packing group	II



ADR



IATA



IMDG

15. REGULATORY INFORMATION

Labeling

Contains

Methanol

Symbol(s)



Toxic



Highly flammable

R-phrases(s)

R11 Highly flammable.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

S-phrases(s)

S16 Keep away from sources of ignition - No smoking.

S23 Do not breathe fumes, vapour.

S24/25 Avoid contact with skin and eyes.

S36/37 Wear suitable protective clothing and gloves.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

S60 This material and its container must be disposed of as hazardous waste.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work.

Regulatory information

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

16. OTHER INFORMATION

Wording of the R-phrases in sections 2 and 3

R11 Highly flammable.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Inventory status

Country(s) or region

Inventory name

On inventory (yes/no)*

Europe

European Inventory of Existing Commercial Chemical Substances (EINECS)

Yes

Europe

European List of Notified Chemical Substances (ELINCS)

No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Issue date

12-June-2009