



## SAFETY DATA SHEET

Date of issue: 21/08/02

### 1. Identification of the substance/preparation and of the company/undertaking

#### *Identification of the product*

Catalogue No: 36048

ID No.: 1015800

Product name: **Methanol special quality**

Use of the substance/preparation: General chemical reagent / Organic solvent

#### *Manufacturer/supplier identification*

Company: VWR International Ltd  
Hunter Boulevard, Magna Park, Lutterworth, Leicestershire, England, LE17 4XN  
Telephone : + 44 (0) 1455 558600      Telefax : + 44 (0) 1455 558586

Emergency telephone No.: + 44 (0) 1202 669700

### 2. Composition/information on ingredients

#### *Chemical characterization*

Organic liquid

Product name: Methanol

Synonyms: Methyl alcohol, carbinol, wood alcohol

CAS number: 67-56-1

EC-No.: 200-659-6

EC Index No.: 603-001-00-X

Molecular formula:  $\text{CH}_3\text{OH} = 32.04 \text{ g/mol}$

### 3. Hazards identification

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.

### 4. First aid measures

- Eye contact: Irrigate thoroughly with water for at least 10 minutes. OBTAIN MEDICAL ATTENTION.
- Inhalation: Remove from exposure, rest and keep warm. In severe cases obtain medical attention.
- Skin contact: Wash off skin thoroughly with water. Remove contaminated clothing and wash before re-use. Unless contact has been slight, OBTAIN MEDICAL ATTENTION.
- Ingestion: Wash out mouth thoroughly with water and give plenty of water to drink. OBTAIN MEDICAL ATTENTION.

### 5. Fire-fighting measures

#### *Special risks:*

Highly flammable. Vapour/air mixture explosive. May evolve toxic fumes in fire.

### ***Suitable extinguishing media:***

Water spray, dry powder or vaporising liquids

Do not stay in dangerous zone without respiratory protective equipment. Prevent fire fighting water entering watercourses or ground-water.

### **6. Accidental release measures**

Shut off all sources of ignition. Inform others to keep at a safe distance. Wear appropriate protective clothing. Ensure supply of fresh air in enclosed rooms.

Absorb on an inert absorbent, (e.g. BDH Spillage absorption granules), transfer to a suitable container and arrange removal by disposal company. Wash site of spillage thoroughly with water and detergent.

For large spillages liquids should be contained with sand or earth and both liquids and solids transferred to salvage containers. Any residues should be treated as for small spillages.

### **7. Handling and storage**

#### ***Handling:***

Take precautions against static discharge. All electrical equipment must be flameproofed. Wear appropriate protective clothing. Work under fume extractor. Do not inhale substance. Do not empty into drains.

#### ***Storage:***

Store at room temperature (15 to 25°C recommended). Keep well closed and protected from direct sunlight and moisture. Store small containers in suitable flammable liquid storage cabinets when not in use. Larger drums (200l) must be kept in purpose-built stores.

### **8. Exposure controls/personal protection**

#### ***UK Exposure Limits:***

WEL - Methanol:

Long-term: 266 mg/m<sup>3</sup> (200ppm) Short term: 333 mg/m<sup>3</sup> (250 ppm) (Sk, IL V)

#### ***Monitoring procedure:***

Draw a known quantity of workplace air through a tube packed with silica gel, desorb the substance and determine its concentration by chromatography. (GLC-FID) (NIOSH 2000, OSHA 91)

#### ***Personal protective equipment:***

Engineering methods to control or prevent exposure are preferred. Methods could include process enclosure or mechanical ventilation.

As appropriate to the situation and the quantity handled.

- Ventilation: Fume cupboard, flameproof
- Respirator: Self-contained breathing apparatus
- Gloves: Butyl rubber, Viton™, PE/EVAL (Silver Shield). Gloves subject to permeation or any sign of degradation must be removed and replaced immediately.
- Eye Protection: Goggles or face-shield
- Other Precautions: Plastic apron, sleeves, boots - if handling large quantities

### ***Environmental exposure controls:***

Do not allow to enter drinking water supplies, waste water, or soil!

## **9. Physical and chemical properties**

### ***General information:***

Form: liquid  
Colour: colourless  
Odour: characteristic

### ***Health, safety and environmental information:***

Melting temperature -98°C  
Boiling temperature 65°C  
Density(g/ml) 0.79  
Vapour pressure 128 hPa (20°C)  
Relative vapour density: 1.11 (air = 1)  
Evaporation rate: 460 (n-Butyl acetate = 100)  
Solubility in water Miscible in all proportions  
Other solubility data: Benzene: Miscible in all proportions  
Diethyl ether: Miscible in all proportions  
Flash point 12°C  
Explosion limits: lower: 7.3 %v/v  
upper: 37 %v/v  
Auto-ignition temperature 464°C  
Viscosity: 0.614 mPas (20°C)  
Log P(o/w): -0.66 / -0.82  
Additional data: Refractive index: 1.3285 (20°C)  
Dipole moment: 1.7 Debye (20°C)  
Dielectric constant: 32.6 (25°C)

## **10. Stability and reactivity**

Stable.

Substances to be avoided

acid halides, alkali metals, alkaline earth metals, oxidizing agents, hydrides, zinc diethyl, halogen compounds, chloroform (in the presence of: alkali hydroxides).

The possibility of reaction with other substances cannot be excluded.

## **11. Toxicological information**

- After ingestion: toxic.
  - After inhalation of vapours: Irritation symptoms in the respiratory tract.
  - After contact with substance: Irritation of: eyes, mucous membranes.
  - After the absorption of large quantities: nausea, vomiting, headache, inebriation, impaired vision, blindness (Irreversible damage of the optical nerve.).
  - Systemic effect: acidosis, drop in blood pressure, agitation, spasms, narcosis, coma.
- The onset of symptoms may be delayed.

### ***Further data***

LDLo (oral, human): 143 mg/kg  
LD50 (oral, rat): 5628 mg/kg.

LC50 (inhalation, rat): 64,000 ppm/4h  
Skin irritation test (rabbit): moderate irritant effect  
Eye irritation test (rabbit): moderate irritant effect  
Ames-Test: negative  
Sensitization test (guinea pig): negative  
We have no evidence of carcinogenic effects. Evidence of reproductive effects.

## 12. Ecological information

Low aquatic toxicity. Bioaccumulation potential: low (Log Pow <2). Biological degradability: good.

### *Further ecological data:*

Henry constant: 0.044 Pa.m<sup>3</sup>/mol    Koc: 2

Fish toxicity:

LC50 (Salmo gairdneri): 13,000 mg/kg/96h

LC50 (Pimephales promelas): 29,000 mg/l/96h

LC50 (Lepomis mochochirus): 15,400 mg/l/96h

Daphnia toxicity:

EC50 (Daphnia magna): >10,000 mg.kg/24h

ThOD: 1.5 g/g

BOD5: 62% of ThOD

COD: 70-100% of ThOD

### *Remarks:*

Adverse ecological effects cannot be excluded in the event of improper handling or disposal.

## 13. Disposal considerations

Chemical residues are generally classified as hazardous or special waste, and as such are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company. Rinse out empty containers thoroughly before returning for recycling.

When recovery and recycling is not possible, incineration in a high temperature incinerator is the recommended method of disposal.

## 14. Transport information

UN-No.: 1230

Class: 3 / 6.1

Packaging group: II

Proper shipping name: METHANOL (METHYL ALCOHOL)

## 15. Regulatory information

### *Labelling according to EC directives*

Symbol(s): F T    Highly flammable. Toxic.

R-phrases: R11-23/24/25-39/23/24/25

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.

S-phrases: S7-16-36/37-45

Keep container tightly closed. Keep away from sources of ignition - No smoking. Wear suitable protective clothing and gloves.

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

EC-No.: 200-659-6

***Local Regulations***

Within the UK, the use of this material must be assessed under the Dangerous Substances and Explosive Atmospheres (DSEAR) Regulations.

U.K. Transport Category 2

Within the UK, the use of this material must be assessed under the Control of Substances Hazardous to Health (COSHH) regulations.

**16. Other information**

Revision.

Supersedes edition of: 01/11/99

Reason for alteration: General update.

Date of issue: 21/08/02

Date of print: 19/10/05