Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.02.2013 Revision: 28.02.2013

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

· **Product identifier**

· **Trade name: 99%Methanol Absolute alcohol**

· **Article number:** 20-4400-10
· **CAS Number:**
67-56-1
· **EC number:**
200-659-6
· **Index number:**
603-001-00-X
· **Registration number** 01-2119433307-44
· **Relevant identified uses of the substance or mixture and uses advised against**
Use as an intermediate/Use as an process chemical; Use as a fuel in industrial settings; Industrial use in cleaning agents; Professional use in cleaning agents; Use as a laboratory reagent in industrial settings; Use as a laboratory reagent in professional settings; Industrial use in wastewater treatment processes; Industrial use as oilfield chemical (addition to water based drilling agents); Consumer use of cleaning agents and de-icers (liquid products); Consumer use of cleaning agents and de-icers (spray products); Consumer use of fuels indoors indoors (Domestic/hobby use e.g in model engines, fuel cells, fondue sets); Consumer use of fuels outdoors (gasoline additive); Use as an process chemical (formaldehyde, dimethylether, MTBE, elimination of crystaline hydrates in pipelines and wellbore testing); Substance for Transesterfication; use as solvent, process aid or internediate in the manufacturing of pharmaceuticals and intermediates; Industrial Cooling Water Chemicals; Industrial Refinery Chemicals; Industrial Offshore Use of Chemicals in Oil & Gas Production; Transported Isolated Intermediate used under Strictly Controlled Conditions.

Information on uses advised against: Food products
· **Sector of Use**
SU0 Other
SU2b Offshore industries
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU4 Manufacture of food products
SU5 Manufacture of textiles, leather, fur
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU23 Electricity, steam, gas water supply and sewage treatment
· **Product category**
PC0 Other
PC4 Anti-Freeze and de-icing products
PC13 Fuels
PC19 Intermediate
PC21 Laboratory chemicals
PC29 Pharmaceuticals
PC32 Polymer preparations and compounds
PC35 Washing and cleaning products (including solvent based products)
PC39 Cosmetics, personal care products
· **Process category**
PROC0: Other
PROC1 Use in closed process, no likelihood of exposure
PROC2 Use in closed, continuous process with occasional controlled exposure
PROC3 Use in closed batch process (synthesis or formulation)
PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC7 Industrial spraying
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

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PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
PROC19 Hand-mixing with intimate contact and only PPE available

· **Environmental release category**
ERC0 Other
ERC1 Manufacture of substances
ERC2 Formulation of preparations
ERC4 Industrial use of processing aids in processes and products, not becoming part of articles
ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)
ERC6b Industrial use of reactive processing aids
ERC7 Industrial use of substances in closed systems
ERC8a Wide dispersive indoor use of processing aids in open systems
ERC8b Wide dispersive indoor use of reactive substances in open systems
ERC8d Wide dispersive outdoor use of processing aids in open systems
ERC8e Wide dispersive outdoor use of reactive substances in open systems
ERC9b Wide dispersive outdoor use of substances in closed systems

· **Article category** AC0 Other

· **Application of the substance / the preparation**
The substance has many industrial, professional and consumer applications.

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Severn Biotech Ltd.
Unit 2,
Park Lane,
Kidderminster,
Worcestershire.
DY11 6TJ
UK
Tel: 0044 1562 825286
Fax: 0044 1562 825284
email: info@severnbiotech.com

· **Further information obtainable from:** Product safety department.

· **Emergency telephone number:** Tel: 0044 1562 825286 (not 24 hours)

2 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.

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GHS08 health hazard

STOT SE 1 H370 Causes damage to organs.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**


T; Toxic

R23/24/25-39/23/24/25: 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.


F; Highly flammable

R11: Highly flammable.

· **Information concerning particular hazards for human and environment:** Not applicable.

· **Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS02, GHS06, GHS08

· **Signal word** Danger

· **Hazard statements**

H225 Highly flammable liquid and vapour.
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H370 Causes damage to organs.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P270 Do no eat, drink or smoke when using this product.
P260 Do not breathe mist/vapours/spray.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

67-56-1 Methanol

· **Identification number(s)**

· **EC number:** 200-659-6

· **Index number:** 603-001-00-X

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

DO NOT DELAY!
Supply fresh air or oxygen; call for doctor.

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In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
DO NOT DELAY!
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
DO NOT DELAY!
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
DO NOT DELAY!
Wash mouth out with water
Call for a doctor immediately.
Rinse mouth immediately and then drink plenty of water, induce vomiting, seek medical attention.
Administer 50 ml of pure ethanol in a drinkable concentration.
· **Information for doctor:**
Effects may be delayed.
ANTIDOTE: ethanol may inhibit methanol metabolism.
Single large oral doses may result in such adverse effects as:, disturbance of vision, skin irritation
Treatment: Symptomatic treatment (decontamination, vital functions).
· **Most important symptoms and effects, both acute and delayed**
Headache
Dizziness
Unconsciousness
Nausea
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
Highly flammable.
Vapour/air mixtures are explosive.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
Do not inhale explosion gases or combustion gases.
· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep ignition sources away - no smoking.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
Ensure adequate ventilation.

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· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Store in cool, dry place in tightly closed receptacles.
Avoid splashes or spray in enclosed areas.
Safety showers and eye wash facilities should be available at the work area.
Avoid direct contact (skin contact, ingestion and/or inhalation of fume/mist/dust) with the product.
Open and handle receptacle with care.
· **Information about fire - and explosion protection:**
Fumes can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
Closed system, ventilation, explosion-proof electrical equipment and lighting.
Do NOT use compressed air for filling, discharging, or handling.
Use non-sparking handtools.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Prevent any seepage into the ground.
Store in a cool location.
· **Information about storage in one common storage facility:**
Store away from oxidizing agents.
Store away from foodstuffs.
· **Further information about storage conditions:**
Store in a bunded area.
Store receptacle in a well ventilated area.
Store under lock and key and out of the reach of children.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
67-56-1 Methanol	
WEL	Short-term value: 333 mg/m³, 250 ppm Long-term value: 266 mg/m³, 200 ppm Sk

· **DNELs**
WORKERS
Acute / short-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 40 mg/kg bw/day

Inhalation DN(M)EL

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- DNEL (Derived No Effect Level): 260 mg/m³

Acute / short-term exposure - local effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 260 mg/m³

Long-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 40 mg/kg bw/day

Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 260 mg/m³

Long-term exposure - local effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 260 mg/m³

GENERAL POPULATION
Acute / short-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 8 mg/kg bw/day

Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 50 mg/m³

Oral DN(M)EL
- DNEL (Derived No Effect Level): 8 mg/kg bw/day

Acute / short-term exposure - local effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 50 mg/m³

Long-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 8 mg/kg bw/day

Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 50 mg/m³

Oral DN(M)EL
- DNEL (Derived No Effect Level): 8 mg/kg bw/day

Long-term exposure - local effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 50 mg/m³

· **PNECs**
PNEC aqua (freshwater): 154 mg/L
PNEC aqua (marine water): 15.4 mg/L
PNEC aqua (intermittent releases): 1540 mg/L
PNEC STP: 100 mg/L
PNEC sediment (freshwater): 570.4 mg/kg sediment dw
PNEC soil: 23.5 mg/kg soil dw
· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.
· **General protective and hygienic measures:**
Do not eat, drink, smoke or sniff while working.

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Storing food in the working area is prohibited.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
A safe system of work must be formulated and followed to ensure that workers who may be pregnant or breastfeeding do not come into direct contact with the product.
A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.
Take note of assigned Workplace Exposure Limits.
Ensure that eyewash stations and safety showers are close to the workstation location.
Depending on the degree of exposure, periodic medical examination is suggested.

· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Solvent resistant protective clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Alcohol-like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	-98 °C
Boiling point/Boiling range:	64.7 °C
· **Flash point:**	11 °C
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	455 °C

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· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Not determined.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	5.5 Vol %
Upper:	44 Vol %
· **Vapour pressure at 20 °C:**	128 hPa
· **Density at 20 °C:**	0.79 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	-0.77 log POW
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
The vapour mixes well with air, explosive mixtures are easily formed.
· **Possibility of hazardous reactions** Reacts violently with oxidants causing fire and explosion hazard.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** Strong oxidising agents.
· **Hazardous decomposition products:** Carbon monoxide and carbon dioxide
· **Additional information:** Burns with nonluminous bluish flame.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Other information (about experimental toxicology):**
ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation and through the skin and by ingestion.

INHALATION RISK: A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20 °C.

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· **Subacute to chronic toxicity:**
EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the central nervous system, resulting in persistent or recurring headaches and impaired vision.
Depending on the degree of exposure, periodic medical examination is suggested.
· **Additional toxicological information:**
Depending on the degree of exposure, periodic medical examination is suggested.
Prolonged or repeated skin contact may cause dermatitis.
Methanol can be absorbed through the skin producing systemic effects.
Inhalation of vapours is the most common route of entry.

The substance may cause effects on the central nervous system, resulting in loss of consciousness. Exposure may result in blindness and death. The effects may be delayed. Medical observation is indicated.
Depending on the severity of the exposure and promptness of treatment, the patient may recover completely or may suffer permanent blindness, visual disturbances and/or nervous effects.
Methanol is only slowly eliminated from the body and should be regarded as a cumulative poison. A single exposure may have little effect; however, repeated exposures may result in the accumulation of dangerous levels.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
EC50	>10000 mg/kg (daphnia)

· **Persistence and degradability** biodegradable
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** Product is not expected to bioaccumulate.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Recommended Hierarchy of Controls:
- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Contact waste processors for recycling information.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
· **European waste catalogue**
Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

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· **Uncleaned packaging:**
· **Recommendation:**
Container remains hazardous when empty. Continue to observe all precautions.
Do not mix with other waste streams.
Containers, even those that are “empty,” may contain residues that can develop flammable vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **UN-Number**	
· **ADR, IMDG, IATA**	UN1230
· **UN proper shipping name**	
· **ADR**	1230 METHANOL
· **IMDG, IATA**	METHANOL
· **Transport hazard class(es)**	
· **ADR, IMDG, IATA**	

· **Class**	3 Flammable liquids.
· **Label**	3+6.1
· **Packing group**	
· **ADR, IMDG, IATA**	II
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	336
· **EMS Number:**	F-E,S-D
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **UN "Model Regulation":**	UN1230, METHANOL, 3 (6.1), II

15 Regulatory information

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Product safety department.