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

· 1.1 Product identifier

· Trade name: Methanol

· CAS Number:

67-56-1

 \cdot EC number:

200-659-6

· Index number:

603-001-00-X

- · 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Product category PC21 Laboratory chemicals
- · Application of the substance / the mixture

Laboratory chemicals

Solvents

· Uses advised against

Any use involving aerosol formation or vapour release in excess of the assigned Workplace Exposure Limit where workers are exposed without suitable Respiratory Protective Equpiment.

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving the use of incompatible substances - refer to section 10.

Processes involving extreme heat use advised against.

Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.

The product is intended exclusively for industrial and professional use.

· 1.3 Details of the supplier of the safety data sheet

· 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.

· 1.4 Emergency telephone number:

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

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

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

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

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· Hazard pictograms

(Contd. of page 1)







GHS02

GHS06 GHS08

· Signal word Danger

· Hazard-determining components of labelling:

Methanol

· 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 the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

· 2.3 Other hazards

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · **vPvB**: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Substances
- · CAS No. Description

67-56-1 Methanol

- · Identification number(s)
- · EC number: 200-659-6
- · Index number: 603-001-00-X

SECTION 4: First aid measures

· 4.1 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:

In case of inhalation:

- Provide fresh air.
- In case of breathing difficulties administer oxygen.
- No mouth-to-mouth or mouth-to-nose resuscitation. Use respiratory bag or oxygen resuscitation apparatus.
- Do not leave patient unattended.

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact:

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

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· After swallowing:

Rinse out mouth and then drink plenty of water.

Induce vomiting, if person is conscious. Seek medical help.

- · Information for doctor: Antidote: Ethanol may inhibit methanol metabolism.
- · 4.2 Most important symptoms and effects, both acute and delayed

Headache

Dizziness

Unconsciousness

Nausea

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · 5.2 Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Vapours are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.

Flammable. Vapors may travel to source of ignition and flash back.

- · 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

· Additional information

Absorb gas/vapours with water spray.

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Keep ignition sources away - no smoking.

Vapours are heavier than air. They can spread along the ground and collect in confined spaces.

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Do not allow to penetrate the ground/soil.

Do not allow product to reach sewage system or any water course in the undiluted form.

Prevent seepage into sewage system, workpits and cellars.

· 6.3 Methods and material for containment and cleaning up:

Contain and collect spillage with non-combustible, absorbent material e.g.sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Ensure adequate ventilation.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

Avoid splashes or spray in enclosed areas.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

The product must only be handled by authorised, trained and experienced professionals under strictly controlled conditions.

Conduct maintenance and other work on or in storage/reactor/mixing vessels or closed spaces ONLY under strict Permit to Work conditions.

Welding and other hot work operations in the work area must only be permitted under supervision.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Safety showers and eye wash facilities should be available at the work area.

· 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.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

Prevent any seepage into the ground.

Store in a cool location.

· Information about storage in one common storage facility:

Store away from oxidising agents.

Store away from foodstuffs.

· Further information about storage conditions:

Store receptacle in a well ventilated area.

Store under lock and key and out of the reach of children.

Store in cool, dry conditions in well sealed receptacles.

- · Storage class: 3
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 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

67-56-1 Methanol

Oral	Long-term systemic effects	4 mg/kg bw/day (general population)
	Short-term systemic effects	4 mg/kg bw/day (general population)
Dermal	Long-term systemic effects	4 mg/kg bw/day (general population)
		20 mg/kg bw/day (worker)

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			(Contd. of page 4)
	Short-term systemic effects	4 mg/kg bw/day (general population)	
		20 mg/kg bw/day (worker)	
Inhalative	Long-term systemic effects	26 mg/m³ (general population)	
		130 mg/m³ (worker)	
	Short-term systemic effects	26 mg/m³ (general population)	
		130 mg/m³ (worker)	
	Long-term local effects	26 mg/m³ (general population)	
		130 mg/m³ (worker)	
	Short-term local effects	26 mg/m³ (general population)	
		130 mg/m³ (worker)	

· PNECs

No hazards identified.

No potential for bioaccumulation.

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Appropriate engineering controls No further data; see section 7.
- · Individual protection measures, such as personal protective equipment
- · General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Storing food in the working area is prohibited.

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.

Do not eat, drink, smoke or sniff while working.

Depending on the degree of exposure, periodic medical examination is suggested.

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.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A for organic vapours

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· Hand protection



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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

Nitrile rubber, NBR

Neoprene 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

Break-through time: > 480 minutes

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye/face protection



Tightly sealed goggles conforming to EN166.

· Body protection:



Protective work clothing

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by the product. Suitable protective equipment may include: Chemical resistant boots, Chemical resistant apron, Full chemical protective suit with a hood, Chemical protective suit consisting of a jacket and trousers. The jacket should be buttoned up to the neck, sleeves sealed at the gloves, and trouser legs worn outside the boots. These precautions are required to prevent the clothing from accidentally trapping product against the skin.

- · Environmental exposure controls Do not let product enter drains. Risk of explosion.
- · Risk management measures

The operators shall be instructed adequately.

The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state Fluid Colourless · Colour: · Odour: Alcohol-like · Odour threshold: Not determined.

· Melting point/freezing point: -98 °C

· Boiling point or initial boiling point and boiling

64.7 °C (67-56-1 Methanol) range · Flammability Highly flammable.

· Lower and upper explosion limit

5.5 Vol % (67-56-1 Methanol) · Lower: · Upper: 44 Vol % (67-56-1 Methanol) 11 °C · Flash point:

455 °C (67-56-1 Methanol) · Auto-ignition temperature:

· Decomposition temperature: Not determined. · pH Not determined.

· Viscosity:

· Kinematic viscosity Not determined. · Dynamic: Not determined.

· Solubility

· water: Fully miscible. · Partition coefficient n-octanol/water (log value) Not determined.

· Vapour pressure at 20 °C: 128 hPa (67-56-1 Methanol)

· Density and/or relative density

Density at 20 °C: 0.79 g/cm³ · Relative density Not determined. · Vapour density Not determined.

· 9.2 Other information NOTE: The physical data presented above are typical

values and should not be construed as a specification.

· Appearance:

· Form: Liquid

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· Important information on protection of health and

environment, and on safety.

• **Ignition temperature:**• **Explosive properties:**Not determined.
Not determined.

· Solvent content:

· VOC (EC) 100.00 % **· Molecular weight** 32 g/mol

 $\cdot \ Change \ in \ condition$

• Evaporation rate Not determined.

· Information with regard to physical hazard classes

Explosives Void
Flammable gases Void
Aerosols Void
Oxidising gases Void
Gases under pressure Void

• Flammable liquids Highly flammable liquid and vapour.

Flammable solids
 Self-reactive substances and mixtures
 Pyrophoric liquids
 Pyrophoric solids
 Self-heating substances and mixtures

 $\cdot \ Substances \ and \ mixtures, \ which \ emit \ flammable$

gases in contact with water Void
Oxidising liquids Void
Oxidising solids Void
Organic peroxides Void
Corrosive to metals Void
Desensitised explosives Void

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions

Forms explosive gases/fumes.

Reacts violently with oxidising agents.

Reacts with acids.

Reacts with alkali and metals.

Reacts with halogenated compounds.

Reacts with reducing agents.

- · 10.4 Conditions to avoid Heat and static discharge.
- · 10.5 Incompatible materials:

Strong acids.

Strong bases.

Strong oxidising agents.

Reducing agents.

Substances specifically listed in section 10.3 as incompatible.

· 10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity Toxic if swallowed, in contact with skin or if inhaled.

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· LD/LC50 values relevant for classification:							
ATE (Acu	ATE (Acute Toxicity Estimates)						
Oral	LD50	100 mg/kg					
Dermal	LD50	300 mg/kg					
Inhalative	LC50/4 h	3 mg/l					

- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure Causes damage to the central nervous system and the visual organs.
- $\cdot \textbf{STOT-repeated exposure} \ \text{Based on available data, the classification criteria are not met.} \\$
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · Subacute to chronic toxicity:

Prolonged or repeated skin contact may irritate and cause dermatitis.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: May have effects on the central nervous system.

· Additional toxicological information:

ROUTES OF EXPOSURE: Can be absorbed into the body by ingestion, by inhalation (mist and vapour) and through the skin.

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

Symptoms of methanol overexposure may include intoxication, headache, drowsiness, nausea, vomiting, blurred vision, blindness, coma and death. It is a defatting agent and can cause skin and eye irritation. Absorption through the skin is possible. Chronic exposure may cause liver and eye injury.

- · 11.2 Information on other hazards
- · Endocrine disrupting properties

Substance is not listed.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability Readily biodegradable
- 12.3 Bioaccumulative potential Product is not expected to bioaccumulate.
- 12.4 Mobility in soil No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- · 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;

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- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

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.

· Uncleaned packaging:

· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. Container remains hazardous when empty. Continue to observe all precautions.

Do not mix with other waste streams.

Disposal must be made according to official regulations.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous 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.

SECTION 14: Transport informa	tion
14.1 UN number or ID number ADR/RID/ADN, IMDG, IATA	UN1230
14.2 UN proper shipping name ADR/RID/ADN IMDG, IATA	UN1230 METHANOL METHANOL
14.3 Transport hazard class(es)	
ADR/RID/ADN	
Class	3 (FT1) Flammable liquids.
Label	3+6.1
· Class · Label	3 Flammable liquids. 3/6.1
IATA	3.0.1
Class	3 Flammable liquids.
Label	3 (6.1)
14.4 Packing group ADR/RID/ADN, IMDG, IATA	П
14.5 Environmental hazards: Marine pollutant:	No

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• **14.6 Special precautions for user** Warning: Flammable liquids. • **Hazard identification number (Kemler code):** 336

Hazchem Code:
EMS Number:
Stowage Category
B

· Stowage Code SW2 Clear of living quarters.

· 14.7 Maritime transport in bulk according to IMO

instruments Not applicable.

· Transport/Additional information:

· ADR/RID/ADN

Limited quantities (LQ)
 Excepted quantities (EQ)
 Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

Transport categoryTunnel restriction codeD/E

· IMDG

Limited quantities (LQ)
 Excepted quantities (EQ)
 Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1230 METHANOL, 3 (6.1), II

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Poisons Act
- · Regulated explosives precursors

Substance is not listed.

· Regulated poisons

Substance is not listed.

· Reportable explosives precursors

Substance is not listed.

· Reportable poisons

Substance is not listed.

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I Substance is not listed.
- · Seveso category

H2

P5c

- · Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- · National regulations:
- · Information about limitation of use:

Class	Share in %
I	100.0

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

SECTION 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.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Training hints

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

· Department issuing SDS: Product safety department.

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

* * Data compared to the previous version altered.

GB