

Creation Date 18-Jun-2009

Revision Date 16-Nov-2010

Revision Number 1

**1. PRODUCT AND COMPANY IDENTIFICATION****Product Identifier**

Product Description:

Water

Cat No.

W/0120/PB15; W/0120/PB17

**Relevant identified uses of the substance or mixture and uses advised against****Recommended Use**

Laboratory chemicals

**Uses advised against**

No Information available

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

Fisher Scientific UK

Bishop Meadow Rd

Loughborough, Leicestershire, Great Britain

LE115RG

Tel: 01509 231166

**E-mail address**

begel.sdsdesk@thermofisher.com

**Emergency Telephone Number**

Tel: 01509 231166 Chemtrec US: (800) 424-9300

Chemtrec EU: 001 (202) 483-7616

**2. HAZARDS IDENTIFICATION****Classification of the substance or mixture****REGULATION (EC) No 1272/2008**

Not hazardous

**Classification according to EU Directives 67/548/EEC or 1999/45/EC***For the full text of the R phrases mentioned in this Section, see Section 16***R -phrase(s)**

none

**Label Elements****Signal Word**

None

**Hazard Statements****Other Hazards**

No information available.

Water

Revision Date 16-Nov-2010

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	EC No.	Weight %	CAS-No	Classification	GHSCAS	REACH Reg. No.
Water 7732-18-5	EEC No 231-791- 2	100	7732-18-5	-	-	-

For the full text of the R phrases mentioned in this Section, see Section 16

**4. FIRST AID MEASURES**Description of first aid measures**Eye Contact**

Flush eyes with water as a precaution

**Skin Contact**

Rinse with water

**Ingestion**

Do not induce vomiting Obtain medical attention

**Inhalation**

Move to fresh air If breathing is difficult, give oxygen

**Notes to Physician**

Treat symptomatically

**5. FIRE-FIGHTING MEASURES**Extinguishing media**Suitable Extinguishing Media**

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

**Extinguishing media which must not be used for safety reasons**

No information available.

Special hazards arising from the substance or mixture

None known

**Advice for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

**Environmental precautions**

Should not be released into the environment.

Water

Revision Date 16-Nov-2010

**Methods and material for containment and cleaning up**

Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

**7. HANDLING AND STORAGE**
**Precautions for Safe Handling**

Handle in accordance with good industrial hygiene and safety practice

**Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place

**Specific End Uses**
**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**
**Control parameters**
**Exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL)**

No information available.

**Predicted No Effect Concentration (PNEC)**

No information available.

**Exposure controls**
**Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location

**Personal protective equipment**
**Eye Protection**

Safety glasses with side-shields

**Hand Protection**

Protective gloves

**Skin and body protection**

Long sleeved clothing

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

**Environmental exposure controls**

No information available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**
**Physical State**

Liquid

**Appearance**

Clear, Colorless

**odor**

odorless

**pH**

No information available.

**Vapor Pressure**

17.5 mmHg @ 20 °C

**Vapor Density**

No information available.

**Boiling Point/Range**

100°C / 212°F

**Melting Point/Range**

No information available.

**Flash Point**

Not applicable

Water

Revision Date 16-Nov-2010

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Autoignition Temperature</b>	No information available.
<b>Evaporation Rate</b>	No information available.
<b>Specific Gravity</b>	1.000
<b>Molecular Formula</b>	H <sub>2</sub> O
<b>Molecular Weight</b>	18.02

**10. STABILITY AND REACTIVITY**
Reactivity
Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions
**Hazardous Polymerization** No information available

**Hazardous Reactions .** No information available.

Conditions to Avoid

None known.

Incompatible Materials

None known.

Hazardous Decomposition Products

None under normal use.

**11. TOXICOLOGICAL INFORMATION**
Information on Toxicological Effects
Acute Toxicity
**Component Information**
**Component**

Water

	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90 mL/kg ( Rat )		

Chronic Toxicity
**Carcinogenicity**

There are no known carcinogenic chemicals in this product

**Sensitization**

No information available.

**Mutagenic Effects**

No information available

**Reproductive Effects**

No information available.

**Water**
**Revision Date 16-Nov-2010**

**Developmental Effects** No information available.  
**Target Organs** None known.  
**Other Adverse Effects** See actual entry in RTECS for complete information  
**Endocrine Disruptor Information** None known

## 12. ECOLOGICAL INFORMATION

**Toxicity**

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Water	EC50: 13 mg/L 72h			

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

Component	log Pow
Water	-1.87

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment**
**Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**
**Waste from Residues / Unused Products**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal

## 14. TRANSPORT INFORMATION

**IMDG/IMO**

Not regulated

Water

Revision Date 16-Nov-2010

**14. TRANSPORT INFORMATION**

ADR Not regulated

IATA Not regulated

**15. REGULATORY INFORMATION**
**Safety, health and environmental regulations/legislation specific for the substance or mixture**
**International Inventories**

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Water	231-791-2	-		X	X	-	X	-	X	X	X

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory Lists

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

**Chemical Safety Assessment**
**16. OTHER INFORMATION**
**Text of R phrases mentioned in Section 2-3**

No information available.

Revision Date 16-Nov-2010

Revision Summary Not applicable

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

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet

Creation Date 16-Jun-2009

Revision Date 09-Nov-2010

Revision Number 2

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier**

**Product Description:** Acetonitrile  
**Cat No.** A/0650/PB15; A/0650/PB17  
**Synonyms** AN; Methyl cyanide

**Relevant identified uses of the substance or mixture and uses advised against**

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

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

**Company**

Fisher Scientific UK  
 Bishop Meadow Rd  
 Loughborough, Leicestershire, Great Britain  
 LE115RG  
 Tel: 01509 231166

**E-mail address** begel.sdsdesk@thermofisher.com

**Emergency Telephone Number**

Tel: 01509 231166 Chemtrec US: (800) 424-9300  
 Chemtrec EU: 001 (202) 483-7616

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Serious Eye Damage/Eye Irritation	Category 2
Flammable liquids.	Category 2

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

*For the full text of the R phrases mentioned in this Section, see Section 16*

**Symbol(s)** F - Highly flammable  
 Xn - Harmful

**R -phrase(s)** R11 - Highly flammable  
 R36 - Irritating to eyes

**Risk Combination Phrases** R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

Acetonitrile

Revision Date 09-Nov-2010

## 2. HAZARDS IDENTIFICATION

**Label Elements**

**Signal Word**
**Danger**
**Hazard Statements**

H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled  
 H302 - Harmful if swallowed  
 H312 - Harmful in contact with skin  
 H225 - Highly flammable liquid and vapor

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

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell  
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 P240 - Ground/Bond container and receiving equipment

**Other Hazards**

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
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Acetonitrile

Revision Date 09-Nov-2010

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Acetonitrile 75-05-8	EEC No. 200- 835-2	99	75-05-8	F;R11 Xn;R20/21/22 Xi;R36	Eye Irrit. 2 (H319) - Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Flam Liq. 2 (H225)	
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For the full text of the R phrases mentioned in this Section, see Section 16

**4. FIRST AID MEASURES**
Description of first aid measures
**General Advice**

Immediate medical attention is required Show this safety data sheet to the doctor in attendance  
If symptoms persist, call a physician

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes  
Immediate medical attention is required

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes Immediate medical attention  
is required

**Ingestion**

Do not induce vomiting Call a physician or Poison Control Center immediately

**Inhalation**

Move to fresh air If breathing is difficult, give oxygen Do not use mouth-to-mouth resuscitation  
if victim ingested or inhaled the substance; induce artificial respiration with a respiratory  
medical device Call a physician or Poison Control Center immediately

**Protection of First-aiders**
**Notes to Physician**

Remove all sources of ignition Use personal protective equipment  
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. 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 Treat symptomatically

**5. FIRE-FIGHTING MEASURES**
Extinguishing media
**Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam Cool closed containers exposed to fire with water spray

**Extinguishing media which must not be used for safety reasons**

No information available.

Special hazards arising from the substance or mixture

**Acetonitrile**
**Revision Date 09-Nov-2010**

Flammable Vapors may form explosive mixtures with air Vapors may travel to source of ignition and flash back Containers may explode when heated

**Advice for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear Thermal decomposition can lead to release of irritating gases and vapors

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

Wear self-contained breathing apparatus and protective suit. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges.

**Environmental precautions**

Should not be released into the environment.

**Methods and material for containment and cleaning up**

Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable and closed containers for disposal. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

Use only under a chemical fume hood Use explosion-proof equipment Use only non-sparking tools Keep away from open flames, hot surfaces and sources of ignition Take precautionary measures against static discharges Do not get in eyes, on skin, or on clothing Do not breathe vapors or spray mist

**Conditions for safe storage, including any incompatibilities**

Keep tightly closed in a dry and cool place Keep away from heat and sources of ignition Protect from moisture Flammables area

**Specific End Uses**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters**
**Exposure limits**
**Component**  
Acetonitrile

European Union	The United Kingdom	France	Belgium	Spain
		VME: 40 ppm VME: 70 mg/m <sup>3</sup>	TWA: 34 mg/m <sup>3</sup> TWA: 20 ppm	VLA-ED: 40 ppm VLA-ED: 68 mg/m <sup>3</sup>

**Component**  
Acetonitrile

Italy	Portugal	The Netherlands	Finland	Denmark
TWA: 20 ppm TWA: 35 mg/m <sup>3</sup>	TWA: 20 ppm	TWA: 34 mg/m <sup>3</sup>	TWA: 34 mg/m <sup>3</sup> TWA: 20 ppm STEL: 68 mg/m <sup>3</sup> STEL: 40 ppm	TWA: 70 mg/m <sup>3</sup> TWA: 40 ppm

**Component**

Austria	Switzerland	Poland	Norway	Ireland

Acetonitrile

Revision Date 09-Nov-2010

Component	Austria	Switzerland	Poland	Norway	Ireland
Acetonitrile	STEL: 160 ppm STEL: 280 mg/m <sup>3</sup> MAK: 70 mg/m <sup>3</sup> MAK: 40 ppm	STEL: 40 ppm STEL: 68 mg/m <sup>3</sup> MAK: 20 ppm MAK: 34 mg/m <sup>3</sup>	NDSCh: 140 mg/m <sup>3</sup> NDS: 70 mg/m <sup>3</sup>	TWA: 30 ppm TWA: 50 mg/m <sup>3</sup>	TWA: 40 ppm TWA: 70 mg/m <sup>3</sup> STEL: 60 ppm STEL: 105 mg/m <sup>3</sup> Skin

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**Exposure controls**

**Engineering Measures**

Use only under a chemical fume hood Use explosion-proof electrical/ventilating/lighting/equipment Ensure that eyewash stations and safety showers are close to the workstation location

**Personal protective equipment**

**Eye Protection**

Safety glasses with side-shields

**Hand Protection**

Protective gloves

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Hygiene Measures**

When using, do not eat, drink or smoke Provide regular cleaning of equipment, work area and clothing

**Environmental exposure controls**

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State**

Liquid

**Appearance**

Colorless

**odor**

aromatic

**pH**

No information available.

**Vapor Pressure**

97 mbar @ 20 °C

**Vapor Density**

1.42 (Air = 1.0)

**Viscosity**

0.36 cP at 20 °C

**Boiling Point/Range**

81 - 82°C / 177.8 - 179.6°F @ 760 mmHg

**Melting Point/Range**

-46°C / -50.8°F

**Flash Point**

2°C / 35.6°F

**Autoignition Temperature**

525°C / 977°F

**Explosion Limits**

**Lower**

3 vol %

**Upper**

16 vol %

**Evaporation Rate**

(Butyl Acetate = 1.0)

**Water Solubility**

miscible

**Specific Gravity**

0.781

**Molecular Formula**

C<sub>2</sub> H<sub>3</sub> N

**Molecular Weight**

41.04

Acetonitrile

Revision Date 09-Nov-2010

## 10. STABILITY AND REACTIVITY

**Reactivity**
**Chemical Stability**

Stable under normal conditions.

**Possibility of Hazardous Reactions**
**Hazardous Polymerization**

No information available

**Hazardous Reactions .**

No information available.

**Conditions to Avoid**

Incompatible products, Keep away from open flames, hot surfaces and sources of ignition, Exposure to moisture.

**Incompatible Materials**

Strong oxidizing agents, Strong acids, Reducing agents.

**Hazardous Decomposition Products**

 Hydrogen cyanide (hydrocyanic acid). Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## 11. TOXICOLOGICAL INFORMATION

**Information on Toxicological Effects**
**Acute Toxicity**

 2460mg/kg rat estimated 2000 mg/kg rat estimated 99999 mg/L (mist) (dust) mg/m<sup>3</sup>  
 estimated 7551 ml/m<sup>3</sup> (vapor) estimated

**Component Information**
**Component**

Acetonitrile

	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetonitrile	2460 mg/kg ( Rat )	2000 mg/kg ( Rabbit )	7551 ppm ( Rat ) 8 h

**Chronic Toxicity**
**Carcinogenicity**

There are no known carcinogenic chemicals in this product

**Sensitization**

No information available.

**Mutagenic Effects**

Mutagenic effects have occurred in experimental animals.

**Reproductive Effects**

Experiments have shown reproductive toxicity effects on laboratory animals

**Developmental Effects**

Developmental effects have occurred in experimental animals

**Teratogenicity**

Teratogenic effects have occurred in experimental animals.

**Target Organs**

Central nervous system (CNS) Respiratory system Kidney Liver Eyes Skin

**Other Adverse Effects**

Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information

**Endocrine Disruptor Information**

None known

Acetonitrile

Revision Date 09-Nov-2010

**12. ECOLOGICAL INFORMATION**
**Toxicity**
**Ecotoxicity effects**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Acetonitrile		1850 mg/L LC50 96 h 1650 mg/L LC50 96 h 1000 mg/L LC50 96 h 1600-1690 mg/L LC50 96 h	EC50 = 28000 mg/L 48 h EC50 = 73 mg/L 24 h EC50 = 7500 mg/L 15 h	5838 mg/L EC50 = 18 h

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

Component	log Pow
Acetonitrile	0

**Mobility in soil**
**Results of PBT and vPvB assessment**
**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**
**Waste treatment methods**
**Waste from Residues / Unused Products**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal

**14. TRANSPORT INFORMATION**
**IMDG/IMO**

UN-No	1648
Hazard Class	3

Acetonitrile

Revision Date 09-Nov-2010

**14. TRANSPORT INFORMATION**

**Packing Group** II  
**Proper Shipping Name** ACETONITRILE

**ADR**

**UN-No** 1648  
**Hazard Class** 3  
**Packing Group** II  
**Proper Shipping Name** ACETONITRILE

**IATA**

**UN-No** 1648  
**Hazard Class** 3  
**Packing Group** II  
**Proper Shipping Name** ACETONITRILE

**15. REGULATORY INFORMATION**
**Safety, health and environmental regulations/legislation specific for the substance or mixture**
**International Inventories**

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Acetonitrile	200-835-2	-		T	X	-	X	X	X	X	KE-00067 X

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory Lists

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

**Chemical Safety Assessment**
**16. OTHER INFORMATION**

Acetonitrile

Revision Date 09-Nov-2010

**16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

R11 - Highly flammable

R36 - Irritating to eyes

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

Revision Date 09-Nov-2010

Revision Summary Not applicable

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

**Disclaimer**

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End of Safety Data Sheet

Creation Date 27-Apr-2009

Revision Date 10-Nov-2010

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier**

**Product Description:** Methanol  
**Cat No.** M/4070/PB15; M/4070/PB17  
**Synonyms** Methyl alcohol

**Relevant identified uses of the substance or mixture and uses advised against**

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

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

**Company**

Fisher Scientific UK  
 Bishop Meadow Rd  
 Loughborough, Leicestershire, Great Britain  
 LE115RG  
 Tel: 01509 231166

**E-mail address** begel.sdsdesk@thermofisher.com

**Emergency Telephone Number**

Tel: 01509 231166 Chemtrec US: (800) 424-9300  
 Chemtrec EU: 001 (202) 483-7616

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

Acute oral toxicity	Category 3
Acute dermal toxicity	Category 3
Acute Inhalation Toxicity - Vapors	Category 3
Specific target organ systemic toxicity (single exposure)	Category 1
Flammable liquids.	Category 2

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

*For the full text of the R phrases mentioned in this Section, see Section 16*

**Symbol(s)** T - Toxic  
 F - Highly flammable

**R -phrase(s)** R11 - Highly flammable

**Risk Combination Phrases** 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



Methanol

Revision Date 10-Nov-2010

**2. HAZARDS IDENTIFICATION**
**Label Elements**

**Signal Word**
**Danger**
**Hazard Statements**

H301 - Toxic if swallowed  
 H311 - Toxic in contact with skin  
 H331 - Toxic if inhaled  
 H370 - Causes damage to organs  
 H225 - Highly flammable liquid and vapor

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

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
 P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water  
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 P240 - Ground/Bond container and receiving equipment

**Other Hazards**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
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Methanol

Revision Date 10-Nov-2010

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Methyl alcohol 67-56-1	EEC No. 200- 659-6	>95	67-56-1	F;R11 T;R23/24/25- 39/23/24/25	STOT SE 1 (H370) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Flam. liq. 2 (H225)	-
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For the full text of the R phrases mentioned in this Section, see Section 16

**4. FIRST AID MEASURES**
Description of first aid measures
**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes  
Immediate medical attention is required

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes Immediate medical attention is required

**Ingestion**

Do not induce vomiting Call a physician or Poison Control Center immediately

**Inhalation**

Move to fresh air If breathing is difficult, give oxygen Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device Immediate medical attention is required

**Notes to Physician**

Treat symptomatically

**5. FIRE-FIGHTING MEASURES**
Extinguishing media
**Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam Use water spray to cool unopened containers

**Extinguishing media which must not be used for safety reasons**

No information available.

Special hazards arising from the substance or mixture

Flammable Risk of ignition Vapors may form explosive mixtures with air Vapors may travel to source of ignition and flash back  
Containers may explode when heated

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear Thermal decomposition can lead to release of irritating gases and vapors

Methanol

Revision Date 10-Nov-2010

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

### Environmental precautions

Should not be released into the environment.

### Methods and material for containment and cleaning up

Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable and closed containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Use only under a chemical fume hood Use explosion-proof equipment Keep away from open flames, hot surfaces and sources of ignition Take precautionary measures against static discharges Do not breathe vapors or spray mist Do not get in eyes, on skin, or on clothing

### Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place Keep away from open flames, hot surfaces and sources of ignition Flammables area

### Specific End Uses

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure limits

**Component**  
Methyl alcohol

European Union	The United Kingdom	France	Belgium	Spain
	WEL - TWA: 200 ppm TWA: 266 mg/m <sup>3</sup> TWA WEL - STEL: 250 ppm STEL: 333 mg/m <sup>3</sup> STEL	VME: 200 ppm VME: 260 mg/m <sup>3</sup> VLCT: 1000 ppm VLCT: 1300 mg/m <sup>3</sup>	STEL: 250 ppm STEL: 333 mg/m <sup>3</sup> TWA: 266 mg/m <sup>3</sup> TWA: 200 ppm	VLA-ED: 266 mg/m <sup>3</sup> VLA-ED: 200 ppm

**Component**  
Methyl alcohol

Italy	Portugal	The Netherlands	Finland	Denmark
TWA: 200 ppm TWA: 260 mg/m <sup>3</sup>	STEL: 250 ppm TWA: 200 ppm	STEL: 520 mg/m <sup>3</sup> TWA: 260 mg/m <sup>3</sup>	TWA: 270 mg/m <sup>3</sup> TWA: 200 ppm STEL: 330 mg/m <sup>3</sup> STEL: 250 ppm	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup>

**Component**  
Methyl alcohol

Austria	Switzerland	Poland	Norway	Ireland
STEL: 1040 mg/m <sup>3</sup> STEL: 800 ppm MAK: 260 mg/m <sup>3</sup> MAK: 200 ppm	STEL: 1040 mg/m <sup>3</sup> STEL: 800 ppm MAK: 200 ppm MAK: 260 mg/m <sup>3</sup>	NDSch: 300 mg/m <sup>3</sup> NDS: 100 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 130 mg/m <sup>3</sup>	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> STEL: 250 ppm STEL: 310 mg/m <sup>3</sup> Skin

**Methanol**
**Revision Date 10-Nov-2010**

<b>Derived No Effect Level (DNEL)</b>	No information available.
<b>Predicted No Effect Concentration (PNEC)</b>	No information available.
<b>Exposure controls Engineering Measures</b>	Use only under a chemical fume hood Use explosion-proof electrical/ventilating/lighting/equipment Ensure that eyewash stations and safety showers are close to the workstation location
<b>Personal protective equipment</b>	
<b>Eye Protection</b>	Tightly fitting safety goggles
<b>Hand Protection</b>	Protective gloves
<b>Skin and body protection</b>	Long sleeved clothing
<b>Respiratory Protection</b>	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Colorless
<b>odor</b>	Alcohol-like
<b>pH</b>	No information available.
<b>Vapor Pressure</b>	128 hPa @ 20 °C
<b>Vapor Density</b>	1.11 (Air = 1.0)
<b>Viscosity</b>	0.55 cP at 20 °C
<b>Boiling Point/Range</b>	64.7°C / 148.5°F @ 760 mmHg
<b>Melting Point/Range</b>	-98°C / -144.4°F
<b>Flash Point</b>	12°C / 53.6°F
<b>Autoignition Temperature</b>	455°C / 851°F
<b>Explosion Limits</b>	
<b>Lower</b>	6 vol%
<b>Upper</b>	31 vol%
<b>Evaporation Rate</b>	(Ether = 1.0)
<b>Water Solubility</b>	miscible
<b>Specific Gravity</b>	0.791
<b>Molecular Formula</b>	C H4 O
<b>Molecular Weight</b>	32.04

## 10. STABILITY AND REACTIVITY

Reactivity  
Chemical Stability

**Methanol**
**Revision Date 10-Nov-2010**
**10. STABILITY AND REACTIVITY**

Stable under normal conditions.

**Possibility of Hazardous Reactions**

**Hazardous Polymerization** Hazardous polymerization does not occur.  
**Hazardous Reactions .** None under normal processing..

**Conditions to Avoid**

Incompatible products, Heat, flames and sparks.

**Incompatible Materials**

Strong oxidizing agents, Strong acids, Acid anhydrides, Acid chlorides, Strong bases, Metals, Peroxides.

**Hazardous Decomposition Products**

Carbon monoxide (CO). Formaldehyde.

**11. TOXICOLOGICAL INFORMATION**
**Information on Toxicological Effects**
**Acute Toxicity**
**Component Information**
**Component**  
 Methyl alcohol

LD50 Oral	LD50 Dermal	LC50 Inhalation
5628 mg/kg ( Rat )	15800 mg/kg ( Rabbit )	64000 ppm ( Rat ) 4 h 83.2 mg/L ( Rat ) 4 h

**Chronic Toxicity**
**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Sensitization**

No information available.

**Mutagenic Effects**

Mutagenic effects have occurred in experimental animals.

**Reproductive Effects**

Experiments have shown reproductive toxicity effects on laboratory animals

**Developmental Effects**

Developmental effects have occurred in experimental animals

**Teratogenicity**

Teratogenic effects have occurred in experimental animals.

**Target Organs**

Gastrointestinal tract (GI) Central nervous system (CNS) Eyes Respiratory system Skin Optic nerve Liver Kidney spleen Blood

**Other Adverse Effects**

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

**Endocrine Disruptor Information**

None known

Methanol

Revision Date 10-Nov-2010

**12. ECOLOGICAL INFORMATION**
**Toxicity**
**Ecotoxicity effects**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methyl alcohol		Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

Component	log Pow
Methyl alcohol	-0.74

**Mobility in soil**
**Results of PBT and vPvB assessment**
**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**
**Waste treatment methods**
**Waste from Residues / Unused  
Products**

Dispose of in accordance with local regulations

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal

**14. TRANSPORT INFORMATION**
**IMDG/IMO**

UN-No	UN1230
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	II

Methanol

Revision Date 10-Nov-2010

**14. TRANSPORT INFORMATION**
**Proper Shipping Name** METHANOL

**ADR**
**UN-No** UN1230  
**Hazard Class** 3  
**Subsidiary Class** 6.1  
**Packing Group** II  
**Proper Shipping Name** METHANOL

**IATA**
**UN-No** UN1230  
**Hazard Class** 3  
**Subsidiary Hazard Class** 6.1  
**Packing Group** II  
**Proper Shipping Name** METHANOL

**15. REGULATORY INFORMATION**
**Safety, health and environmental regulations/legislation specific for the substance or mixture**
**International Inventories**

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Methyl alcohol	200-659-6	-		X	X	-	X	X	X	X	KE-23193 X

**Legend**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory Lists

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

**Chemical Safety Assessment**
**16. OTHER INFORMATION**

Methanol

Revision Date 10-Nov-2010

**16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

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

Revision Date 10-Nov-2010

Revision Summary Not applicable

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

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet