SAFETY DATA SHEET
METHYLATED SPIRITS 95% v/v 66 OP LRG

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

1.1. Product identifier
Product name METHYLATED SPIRITS 95% v/v 66 OP LRG
Product number 1818
CAS number 64-17-5

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Laboratory reagent.
Uses advised against Do not use for personal cleansing. Use only for intended applications.

1.3. Details of the supplier of the safety data sheet
Supplier Reagent Chemical Services
18 Aston Fields Road
Whitehouse Industrial Estate
Runcorn
Cheshire WA7 3DL
T: 01928 716903 (08.30 - 17.00)
F: 01928 716425
E: info@reagent.co.uk

1.4. Emergency telephone number
Emergency telephone OHES Environmental Ltd 24-7
Tel. 0333 333 9939 (24 hour)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards Flam. Liq. 2 - H225
Health hazards Eye Irrit. 2 - H319 STOT SE 2 - H371
Environmental hazards Not Classified

2.2. Label elements
Pictogram

Signal word Danger
METHYLATED SPIRITS 95% v/v 66 OP LRG

Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H371 May cause damage to organs.

Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 Take precautionary measures against static discharge.
P260 Do not breathe vapour/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/ container in accordance with national regulations.

Contains
METHANOL

Supplementary precautionary statements
P233 Keep container tightly closed.
P240 Ground/ bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

2.3. Other hazards
This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>ETHANOL</th>
<th>60-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 64-17-5</td>
<td>EC number: 200-578-6</td>
</tr>
<tr>
<td>Classification</td>
<td>Flam. Liq. 2 - H225</td>
</tr>
<tr>
<td></td>
<td>Eye Irrit. 2 - H319</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>METHANOL</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 67-56-1</td>
<td>EC number: 200-659-6</td>
</tr>
<tr>
<td>Classification</td>
<td>Flam. Liq. 2 - H225</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 3 - H301</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 3 - H311</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 3 - H331</td>
</tr>
<tr>
<td></td>
<td>STOT SE 1 - H370</td>
</tr>
</tbody>
</table>
METHYLATED SPIRITS 95% v/v 66 OP LRG

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Get medical attention immediately. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Never give anything by mouth to an unconscious person. Show this Safety Data Sheet to the medical personnel.

Inhalation
Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion
Remove any dentures. Rinse mouth thoroughly with water. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin contact
Rinse with water.

Eye contact
Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 10 minutes.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

General information
See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
A single exposure may cause the following adverse effects: Pain or irritation. Intoxication. Narcotic effect. Muscle weakness. Nausea, vomiting.

Ingestion
A single exposure may cause the following adverse effects: Intoxication. Nausea, vomiting. May cause drowsiness or dizziness. Central nervous system depression. May cause severe internal injury.

Skin contact
A single exposure may cause the following adverse effects: Irritation.

Eye contact
Irritating to eyes.

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

Notes for the doctor
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.
METHYLATED SPIRITS 95% v/v 66 OP LRG

5.2. Special hazards arising from the substance or mixture

Specific hazards
Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO2).

5.3. Advice for firefighters

Protective actions during firefighting
Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate.

6.2. Environmental precautions

Environmental precautions
Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Use only non-sparking tools. Use explosion-proof electrical equipment. Do not allow material to enter confined spaces, due to the risk of explosion. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
METHYLATED SPIRITS 95% v/v 66 OP LRG

6.4. Reference to other sections

Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions
Read and follow manufacturer’s recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. In use may form flammable/explosive vapour-air mixture. Vapours may accumulate on the floor and in low-lying areas. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions
Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Eliminate all sources of ignition. Take precautionary measures against static discharges. Earth container and transfer equipment to eliminate sparks from static electricity. Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class
Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits
ETHANOL
Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³ vapour

METHANOL
Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 266 mg/m3(Sk)
Short-term exposure limit (15-minute): WEL 250 ppm(Sk) 333 mg/m3(Sk)
WEL = Workplace Exposure Limit

ETHANOL (CAS: 64-17-5)
METHYLATED SPIRITS 95% v/v 66 OP LRG

DNEL
Workers - Inhalation; Long term systemic effects: 950 mg/m³
Workers - Dermal; Long term systemic effects: 343 mg/kg/day
General population - Inhalation; Long term systemic effects: 114 mg/m³
General population - Dermal; Long term systemic effects: 206 mg/kg/day
General population - Oral; Long term systemic effects: 87 mg/kg/day

PNEC
- Fresh water; 0.96 mg/l
- Marine water; 0.79 mg/l
- STP; 580 mg/l
- Fresh water, Sediment; 3.6 mg/kg
- Marine water, Sediment; 2.9 mg/kg
- Soil; 0.63 mg/kg

METHANOL (CAS: 67-56-1)

DNEL
Workers - Inhalation; Long term systemic effects: 260 mg/m³
Workers - Inhalation; Short term systemic effects: 260 mg/m³
Workers - Inhalation; Long term local effects: 260 mg/m³
Workers - Inhalation; Short term local effects: 260 mg/m³
Workers - Dermal; Long term systemic effects: 40 mg/kg/day
Workers - Dermal; Short term systemic effects: 40 mg/kg/day
General population - Inhalation; Long term systemic effects: 50 mg/m³
General population - Inhalation; Short term systemic effects: 50 mg/m³
General population - Inhalation; Long term local effects: 50 mg/m³
General population - Inhalation; Short term local effects: 50 mg/m³
General population - Dermal; Long term systemic effects: 8 mg/kg/day
General population - Dermal; Short term systemic effects: 8 mg/kg/day
General population - Oral; Long term systemic effects: 8 mg/kg/day
General population - Oral; Short term systemic effects: 8 mg/kg/day

PNEC
- Fresh water; 20.8 mg/l
- Marine water; 2.08 mg/l
- STP; 100 mg/l
- Sediment (Freshwater); 77 mg/kg
- Sediment (Marine water); 7.7 mg/kg
- Soil; 100 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilating equipment.
METHYLATED SPIRITS 95% v/v 66 OP LRG

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended. Butyl rubber. Nitrile rubber. Thickness: > 0.2 mm The selected gloves should have a breakthrough time of at least 4 hours. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance

Liquid.

Colour

Colourless.

Odour

Alcoholic.

pH

Not determined.

Melting point

Approx. -100°C

Initial boiling point and range

Approx. 80°C @ 1013 mbar

Flash point

> 12°C CC (Closed cup).

Evaporation rate

~ 3.4 (butyl acetate = 1)

Upper/lower flammability or explosive limits

Lower flammable/explosive limit: ~3.5 % Volume Upper flammable/explosive limit: ~19 % Volume
METHYLATED SPIRITS 95% v/v 66 OP LRG

Vapour pressure ~58 mbar @ 20°C
Vapour density ~ 1.57
Relative density ~ 0.81 @ 20°C
Solubility(ies) Miscible with water.
Partition coefficient Not determined.
Auto-ignition temperature ~365°C
Decomposition Temperature Not determined.
Viscosity 1.22 cP @ 20°C
Explosive properties Not considered to be explosive.
Oxidising properties Does not meet the criteria for classification as oxidising.

9.2. Other information
The physical data has been applied from 99% methylated spirits.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity The following materials may react with the product: Mineral acids. Oxidising agents.

10.2. Chemical stability
Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions The following materials may react strongly with the product: Oxidising agents. Mineral acids. Aluminium. May generate heat.

10.4. Conditions to avoid
Conditions to avoid Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented. Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition. Avoid freezing.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity - oral
Notes (oral LD₅₀) Based on available data the classification criteria are not met.
ATE oral (mg/kg) 2,631.58

Acute toxicity - dermal
Notes (dermal LD₅₀) Based on available data the classification criteria are not met.
METHYLATED SPIRITS 95% v/v 66 OP LRG

ATE dermal (mg/kg) 7,894.74

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

ATE Inhalation (vapours mg/l) 78.95

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 2 - H371 May cause damage to organs.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation A single exposure may cause the following adverse effects: Pain or irritation. Intoxication. Narcotic effect. Muscle weakness. Nausea, vomiting.

Ingestion A single exposure may cause the following adverse effects: Intoxication. Nausea, vomiting. May cause drowsiness or dizziness. Central nervous system depression. May cause severe internal injury.

Skin contact A single exposure may cause the following adverse effects: Irritation.

Eye contact Irritating to eyes.

Route of entry Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.
METHYLATED SPIRITS 95% v/v 66 OP LRG

ETHANOL

Toxicological effects
The toxicity of this substance has been assessed during REACH registration.

Acute toxicity - oral
Notes (oral LD₅₀) LD₅₀ 10470 mg/kg, Oral, Rat

Acute toxicity - dermal
Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation
Acute toxicity inhalation (LC₅₀ vapours mg/l) 124.7
Species Rat
ATE inhalation (vapours mg/l) 124.7

Skin corrosion/irritation
Skin corrosion/irritation Not irritating.

Animal data
Skin corrosion/irritation Not irritating.

Serious eye damage/irritation
Serious eye damage/irritation Irritating

Respiratory sensitisation
Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation
Skin sensitisation - Guinea pig: Not sensitising.

Germ cell mutagenicity
Genotoxicity - in vitro Bacterial reverse mutation test: Negative.
Genotoxicity - in vivo Chromosome aberration: Negative.

Carcinogenicity
Carcinogenicity NOAEL > 4250 mg/kg/day, Oral, Mouse

Reproductive toxicity
Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure LOAEL 3160 mg/kg, Oral, Rat

Target organs Kidneys

Inhalation Vapours may cause drowsiness and dizziness.
# METHYLATED SPIRITS 95% v/v 66 OP LRG

**Ingestion**
May cause nausea, headache, dizziness and intoxication. May cause stomach pain or vomiting. Unconsciousness, possibly death.

**Skin contact**
May be absorbed through the skin. Product has a defatting effect on skin. May cause irritation.

**Eye contact**
Irritating to eyes.

**Target organs**
Central nervous system

## METHANOL

### Acute toxicity - oral
- **Notes (oral LD₅₀)**  
  LD₀ 2528 mg/kg, Oral, Rat
- **ATE oral (mg/kg)**  
  100.0

### Acute toxicity - dermal
- **Notes (dermal LD₅₀)**  
  No information available.
- **ATE dermal (mg/kg)**  
  300.0

### Acute toxicity - inhalation
- **Acute toxicity inhalation (LC₅₀ vapours mg/l)**  
  85.41
- **Species**  
  Rat
- **Notes (Inhalation LC₅₀)**  
  REACH dossier information.
- **ATE inhalation (vapours mg/l)**  
  3.0

### Skin corrosion/irritation
- **Human skin model test**  
  No information available.

### Serious eye damage/irritation
- **Serious eye damage/irritation**  
  Based on available data the classification criteria are not met.

### Respiratory sensitisation
- **Respiratory sensitisation**  
  No specific test data are available.

### Skin sensitisation
- **Skin sensitisation**  
  Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

### Germ cell mutagenicity
- **Genotoxicity - in vitro**  
  Bacterial reverse mutation test: Negative.

### Carcinogenicity
- **Genotoxicity - in vivo**  
  Micronucleus assay: Negative.

### Reproductive toxicity
- **Carcinogenicity**  
  NOAEC >1.3 mg/l, Inhalation, Mouse

### Reproductive toxicity - fertility
- **Reproductive toxicity - fertility**  
  Fertility: One-generation study - NOAEL <1000 mg/kg, Oral, Mouse
METHYLATED SPIRITS 95% v/v 66 OP LRG

Reproductive toxicity - development
Developmental toxicity: - NOAEL: 945 mg/kg/day, Oral, Rat

Specific target organ toxicity - single exposure
STOT - single exposure Conclusive data but not sufficient for classification.
Target organs Central nervous system

Specific target organ toxicity - repeated exposure
STOT - repeated exposure NOAEL 2.65 mg/l, Inhalation, Rat
Target organs Central nervous system Eyes

Aspiration hazard
Aspiration hazard No information available.

Inhalation Toxic by inhalation. A single exposure may cause the following adverse effects: Vapours may cause headache, fatigue, dizziness and nausea. Prolonged or repeated exposure may cause the following adverse effects: Central nervous system depression.

Ingestion Toxic if swallowed. A single exposure may cause the following adverse effects: May cause nausea, headache, dizziness and intoxication. Prolonged or repeated exposure may cause the following adverse effects: Central nervous system depression. Unconsciousness, possibly death.

Skin contact Toxic in contact with skin. May be absorbed through the skin. Prolonged skin contact may cause redness and irritation.

Eye contact Irritating to eyes.

Route of entry Inhalation Skin absorption Ingestion.

Target organs Central nervous system Eyes

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

ETHANOL

Ecotoxicity The ecotoxicity of this substance has been assessed during REACH registration

12.1. Toxicity
Toxicity Based on available data the classification criteria are not met.

ETHANOL

Acute toxicity - fish LC₅₀, 96 hours: 11,200 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 12340 mg/l, Daphnia magna
Acute toxicity - aquatic plants EC₅₀, 72 hours: 12,900 mg/l, Selenastrum capricornutum
**METHYLATED SPIRITS 95% v/v 66 OP LRG**

**Chronic toxicity - aquatic invertebrates**  
EC₅₀, 10 days: 454 mg/l, Daphnia magna

**Acute toxicity - fish**  
LC₅₀, 96 hours: 15400 mg/l, Lepomis macrochirus (Bluegill)

**Acute toxicity - aquatic invertebrates**  
EC₅₀, 96 hours: 18260 mg/l, Daphnia magna

**Acute toxicity - terrestrial**  
NOEC, 35 days: 10000 mg/kg

**Chronic toxicity - fish early life stage**  
EC₅₀, 200 hours: 14536 mg/l, Oryzias latipes (Red killifish)

12.2. Persistence and degradability

**Persistence and degradability**  
The product is expected to be biodegradable.

---

**ETHANOL**

**Phototransformation**  
Air - Half-life : 38 hours

**Stability (hydrolysis)**  
Scientifically unjustified.

**Biodegradation**  
Water - Degradation (%) 75: 20 days  
The substance is readily biodegradable.

**Biological oxygen demand**  
No information available.

**METHANOL**

**Phototransformation**  
Air - Degradation (%) 50: 17.2 days

**Stability (hydrolysis)**  
Scientifically unjustified.

**Biodegradation**  
Water - Degradation 82.7: 5 days  
The substance is readily biodegradable.

**Biological oxygen demand**  
1.236 g O₂/g substance

12.3. Bioaccumulative potential

**Bioaccumulative potential**  
Bioaccumulation is unlikely.

**Partition coefficient**  
Not determined.

---

**ETHANOL**

**Bioaccumulative potential**  
BCF: 1 - 4.5, Bioaccumulation is unlikely.

**Partition coefficient**  
log Kow: -0.35

---

**METHANOL**

**Bioaccumulative potential**  
Scientifically unjustified. BCF: 1,

**Partition coefficient**  
log Pow: ~ -0.74 REACH dossier information.

12.4. Mobility in soil
METHYLATED SPIRITS 95% v/v 66 OP LRG

Mobility

The product is water-soluble and may spread in water systems. The product contains volatile substances which may spread in the atmosphere.

**ETHANOL**

Mobility

The product is miscible with water and may spread in water systems.

Adsorption/desorption coefficient

Expected to have a low potential for adsorption.

Henry's law constant

No specific test data are available.

**METHANOL**

Mobility

The product is miscible with water and may spread in water systems.

Adsorption/desorption coefficient

Expected to have a low potential for adsorption.

Henry's law constant

0.461 Pa m3/mol @ 25°C

Surface tension

No specific test data are available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

**ETHANOL**

Results of PBT and vPvB assessment

This substance is not classified as PBT or vPvB according to current EU criteria.

**METHANOL**

Results of PBT and vPvB assessment

This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects

None known.

**ETHANOL**

Other adverse effects

None known.

**METHANOL**

Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
METHYLATED SPIRITS 95% v/v 66 OP LRG

General information

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible. Vapour from residual product may create a highly flammable or explosive atmosphere inside the container. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Do not cut or weld used containers unless they have been thoroughly cleaned internally.

SECTION 14: Transport information

General

For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 1170
UN No. (IMDG) 1170
UN No. (ICAO) 1170
UN No. (ADN) 1170

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Proper shipping name (IMDG) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Proper shipping name (ICAO) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Proper shipping name (ADN) ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

14.3. Transport hazard class(es)

ADR/RID class 3
ADR/RID classification code F1
ADR/RID label 3
IMDG class 3
ICAO class/division 3
ADN class 3

Transport labels

14.4. Packing group
METHYLATED SPIRITS 95% v/v 66 OP LRG

ADR/RID packing group II
IMDG packing group II
ADN packing group II
ICAO packing group II

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant No.

14.6. Special precautions for user
Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-E, S-D
ADR transport category 2
Emergency Action Code 2YE
Hazard Identification Number (ADR/RID) 33
Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture


15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

Inventories
EU - EINECS/ELINCS
None of the ingredients are listed or exempt.

SECTION 16: Other information
METHYLATED SPIRITS 95% v/v 66 OP LRG

Abbreviations and acronyms used in the safety data sheet
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms
Flam. Liq. = Flammable liquid
Eye Irrit. = Eye irritation
STOT SE = Specific target organ toxicity-single exposure

General information
This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.

Key literature references and sources for data

Classification procedures according to Regulation (EC) 1272/2008

Training advice
Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Revision date
02/03/2018

Revision
1

SDS number
21309

Hazard statements in full
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H370 Causes damage to organs (Central nervous system, Eyes).
H371 May cause damage to organs.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.