

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Print Date 01.10.2015

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

1.1 Product identifiers

Product name : Industrial Denatured Alcohol (IDA)
REACH No. : All components have been REACH registered.

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

Identified uses : Manufacture of substance. Distribution of substance formulation and (re)packing of substances and mixtures Uses in cleaning agents Uses in coatings. Laboratory agents. De-icing and anti-icing applications. Use as a functional fluid. Other consumer uses.

1.3 Details of the supplier of the safety data sheet

Company : Vet-Way Ltd,
1 Harrier court
Airfield Business Park
Elvington
York
YO41 4EA
UNITED KINGDOM

Telephone : +44 (0)1904 607600
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Physical hazards

Flam. Liq. 2 - H225

Health Hazards

Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox 4 - H332 Eye Irrit. 2 - H319 STOT SE 2 - H371

Environmental hazards:

Not classified

Classification System (67/548/EEC or 1999/45EC)

Xn;R20/21/22, R68/20/21/22. F;R11

Human health

Irritating to eyes. Splashes may cause serious eye damage. Prolonged or repeated contact with skin may cause irritation, redness and skin cracking and oil acne. Vapours may irritate the respiratory system and cause coughing, asthmatic breathing and breathlessness. Harmful by inhalation in high concentrations, vapours and spray mists are narcotiv and may cause headache, fatigue, dizziness and nausea. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death, see Section 11 for additional information on health hazards.

Environmental

This product contains a substance which may cause long term adverse effects in the environment. The product contains a substance which has a photochemical ozone creation potential.

Physiochemical

This product is highly flammable. Vapours may form explosive mixtures with air. Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation

Hazard Pictograms



Signal Word: Danger

Hazard Statements:

- H319 Causes serious eye irritation
- H225 Highly flammable liquid and vapour
- H302 Harmful if swallowed
- H312 Harmful in contact with skin
- H319 Causes serious eye irritation
- H332 Harmful if inhaled
- H371 May cause damage to organs
- H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled

Precautionary Statements:

P501 Dispose of contents/container in accordance with national regulations

Supplementary precautionary Statements

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

P233 Keep container tightly closed

P240 Ground/bond container and receiving equipment

P241 Use explosion-proof electrical equipment

P242 Use only non sparking tools

P243 Take precautionary measures against static discharge

P260 Do not breathe vapour/spray

P261 Avoid breathing vapour/spray

P264 Wash contaminated skin thoroughly after handling

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

P271 Use only outdoors or in a well ventilated area

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

P301+P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor

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

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep 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 so. Continue rinsing

P308+P311 If exposed or concerned: Call a POISON CENTRE or Doctor.

P312 Call a POISON CENTRE/doctor if you feel unwell.

P322 Specific treatment (see medical advice on this label)

P330 Rinse mouth

P363 Wash contaminated clothing before reuse

P337+P313 If eye irritation persists: Get medical attention/advise.

P362+P364 Take off contaminated clothing and wash it before reuse.

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.

Result of PBT and vPvB assessment

PBT: not applicable

vPvB: not applicable

SECTION 3: Composition/information on ingredients

3.1 Chemical Characterisation: Substances Identification number(s) Not applicable

3.2 Chemical characterisation: Mixtures Description:

ETHANOL: EINECS: 200-578-6

CAS: 64-17-5

REG. NR.: 2119457610-43-XXXX

CLP CLASSIFICATION: F;R11

Flam. Liq. 2 - H225, Eye Irrit. 2 - H319

PERCENT: 60-100%

METHANOL: EINECS: 200-659-6

CAS: 67-56-1

REG. NR.: 211943307-44-XXXX

CLP CLASSIFICATION: F;R11 T;R23/24/25,R39/23/24/25

Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE - H370;

Flam. Liq. 2

PERCENT: 1-5%

PYROLIGNEOUS ACIDS:

EINECS: 232-450-0

CAS: 8030-97-5

REG. NR.:

CLP CLASSIFICATION: Xn;R22. Xi;R36/37/38; R10

Acute Tox. 4 - H302, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Acute Tox.4 - H312,
STOT SE 3 - H335

The full text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments The date shown are in accordance with the latest EC Directives

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

CAUTION! First aid personnel must be aware of their own risk during rescue! Remove affected person from source of contamination. NOTE! Keep affected person away from heat, sparks and flames! Keep the affected person warm and at rest. Get prompt medical attention.

If inhaled

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep affected person under observation. Get prompt medical attention. Show this Safety Data Sheet to the medical personnel.

In case of skin contact

Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

In case of eye contact

Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. May cause permanent damage if eye is not immediately irrigated.

If swallowed

Get medical attention immediately. Rinse mouth thoroughly with water. Call an ambulance. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lung. Keep affected person under observation. Show this Safety Data Sheet to the medical personnel.

First aid personnel should wear appropriate protective equipment during any rescue.

4.2 Most important symptoms and effects, both acute and delayed

General information

Get medical attention immediately. The casualty should be transferred to hospital as soon as possible.

Inhalation

Vapours/aerosol spray may irritate the respiratory system. In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Over exposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death.

Ingestion

May cause stomach pain or vomiting. Gastrointestinal symptoms, including upset stomach. Diarrhoea. Nausea, vomiting, vertigo. Ingestion of large amounts may cause unconsciousness.

Skin Contact

Prolonged contact may cause redness, irritation and dry skin, itching and eczema/chapping. This substance is rapidly absorbed through the skin and may cause symptoms similar to those of ingestion.

Eye Contact

Causes serious eye irritation. Immediate first aid is imperative. May cause blurred vision and serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

No specific recommendations, but first aid may be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: Firefighting measures

5.1 Extinguishing Media

Suitable extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder, dry chemicals, sand, dolomite or water fog, spray or mist.

Do not use Nonalcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

HIGHLY FLAMMABLE! May explode when exposed to flames, a spark or an ember. Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Solvent vapours may form explosive mixtures with air. May ignite at high temperature. Highly flammable liquid and vapour. Vapours may accumulate on the floor in low-lying areas. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

Hazardous combustion products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3 Advice for firefighters

If possible fight fire from a protected position. Move containers from fire area if it can be done without risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Withdraw immediately in case of rising sound from venting safety device or any discolouration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Be aware of risk of fire re-starting, and risk of explosion. Control run-off water by containing and keeping it out of sewers and watercourses. Dike for water control. If risk of water pollution occurs, notify appropriate authorities.

Wear self contained breathing apparatus and full protective clothing must be worn in case of fire.

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapours and contact with skin and eyes. Eliminate all ignition sources. Provide adequate ventilation. If ventilation is inadequate, suitable respiratory protection must be worn. Take precautionary measures against static discharges. Take care as floors and other surfaces may become slippery. Follow precautions for safe handling described in this safety data sheet. For personal protection see Section 8.

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses. Do not allow ANY environmental contamination. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body. To prevent release, place container with damaged side up. Contains spillages with sand, earth or any suitable adsorbent material.

6.3 Methods and materials for containment and cleaning up

Ventilate well, stop flow of gas or liquid if possible. Remove ignition sources. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Sewers designed to preclude formation of explosive concentrations of vapour may be permitted. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Remove sources of ignition. Stop leak if possible without risk. Small spillages: Let evaporate. Keep out of confined spaces because of explosion risk. Large spillages: Dam and absorb spillages with sand, earth and other non-combustible material. Shovel into dry containers. Flush the area with water. Should be prevented

from entering drains. Runoff or release to sewer, waterway or ground is forbidden. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. Spillage may be stored as chemical waste in approved area. When dealing with a spillage, please consult the section relating to suitable protective measures. Clean-up personnel should use respiratory and/or liquid contact protection. Wash thoroughly after dealing with a spillage.

6.4 Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. Collect and dispose of spillage as indicated in Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Avoid acids, moisture, and combustible materials. Wear full protective clothing for prolonged exposure and/or high concentrations. Do not use in confined spaces without adequate ventilation and/or respirator. Static electricity and formation of sparks must be prevented. Storage tanks and other containers must be grounded. Use explosion proof electric equipment. Do not handle broken packages without protective equipment. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Avoid eating, drinking and smoking when using the product.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Flammable/combustible - Keep away from oxidisers, heat and flames. May attack some plastics, rubber and coatings. Ground container and transfer equipment to eliminate static electric sparks. Take precautionary measures against static discharges. Do not store near heat sources or expose to high temperatures. Unsuitable containers: aluminium. Keep away from food, drink and animal feeding stuffs.

Further information about storage conditions:

Flammable liquid storage.

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

ETHANOL

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

Short-term exposure limit (15 minute): WEL

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200ppm(Sk) 266mg/m³(Sk)

Short-term exposure limit (15 minute): WEL 250ppm(Sk) 333mg/m³(Sk)

PYROLIGNEOUS ACIDS

Long-term exposure limit (8-hour TWA): No STD

Short-term exposure limit (15 minute): No STD

Additional information: WEL = Workplace Exposure Limit

ETHANOL (CAS: 64-17-5)

Ingredient comments WEL = Workplace Exposure Limits

DNEL Industry - Inhalation; Short term local effects: 1900mg/m³
Industry - Dermal; Long term systemic effects: 343mg/kg/day
Industry - Inhalation; Long term systemic effects: 950mg/m³
Consumer - Inhalation; Short term local effects: 950mg/m³
Consumer - Dermal; Long term systemic effects: 206mg/kg/day
Consumer - Inhalation; Long term systemic effects: 114mg/m³
Consumer - Oral; Long term systemic effects 87mg/kg/day

PNEC Industry - Fresh water; Long term; Long term 0.96mg/l
Industry - Marine water; Long term 0.79mg/l
Industry - Intermittent release; Long term 1540mg/l
Industry - STP; Long term 100mg/l
Industry - Sediment (Freshwater); Long term mg/kg
Industry (Marinewater); Long term mg/kg
Industry - Soil; Long term mg/kg

METHANOL

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

PNEC Industry - Fresh water; Long term; Long term 154mg/l
Industry - Marine water; Long term 15.4mg/l
Industry - STP; Long term 100mg/l
Industry - Sediment (Freshwater); Long term 570.40mg/kg
Industry - Soil; Long term 23.5mg/kg

8.2 Exposure controls

Appropriate engineering controls

Use engineering controls to reduce air contamination to permissible exposure level. Provide eye wash station. If

enclosed handling cannot be guaranteed, ventilation and protective clothing must be used. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. All handling to take place in well-ventilated area. Explosion-proof general and local exhaust ventilation.

Personal protective equipment

Eye/face protection

Wear eye protection. If risk of splashing, wear safety goggles or face shield. Personal protective equipment for eye and face protection should comply with European Standard EN 166(EU).

Skin protection

Protective gloves must be used if there is a risk of direct contact or splash. Use protective gloves made of: Butyl rubber, Viton rubber (fluor rubber) or polythene. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station and safety shower.

Hygiene measures

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. Remove contaminated clothing and protective equipment before entering eating areas. Contaminated clothing should be placed in a closed container for disposal or decontamination.

Respiratory protection

If ventilation is insufficient, suitable respiratory protection must be provided. At work in confined or poorly ventilated spaces, respiratory protection with an air supply must be used. Seek advice from supervisor on the companies' respiratory protection standards. Supplied-air respirator with full facepiece, helmet or hood. Chemical respirator with specific cartridge providing protection against the compound of concern. Change filters frequently. Consult instructions before use. Check that mask fits tight and change filter regularly. When spraying use suitable air-supplied respirator.

Environmental exposure controls

Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Liquid Colour: colourless
b) Odor	Alcoholic
c) Odor Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	Melting point/range: -114 °C
f) Initial boiling point and boiling range	78 °C @1013hPa
g) Flash point	12°C CC (Closed Cup)
h) Evaporation rate	3.4 BuAc=1
i) Flammability (solid, gas)	
j) Upper/lower flammability or explosive limits	
k) Vapour pressure	5.8 kPa @ °C

- l) Vapour density 1.03
- m) Bulk density 0.789kg/l at 20 °C
- n) Water solubility soluble in water. Miscible with organic solvents.
- o) Partition coefficient: n-octanol/water Log Pow: -0.35 20
- p) Auto-ignition temperature 363°C
- q) Viscosity 1.2mPa s @ 20 °C

9.2 Other safety information

Refractive Index 1.3614

Mol. Weight 46.07

Volatile organic compound

This product contains a maximum VOC content of 100%

SECTION 10: Stability and reactivity

10.1 Reactivity

May react with Strong acids and Strong oxidizing agents.

10.2 Chemical stability

Stable at normal temperature conditions and when used as recommended.

10.3 Possibility of hazardous reactions

Reacts with strong acids. Reacts with strong oxidizing agents.

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid heat. Avoid contact with the following materials: Strong oxidizing agents and acids.

10.5 Incompatible materials

Strong acids, Strong oxidizing agents, alkali metals, acid anhydrides

10.6 Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Toxicological information on ingredients

ETHANOL

Acute toxicity - oral	LD50 2000 mg/kg, Oral, Rat
Acute toxicity - dermal	LD50 2000 mg/kg, Dermal, Rabbit
Acute toxicity - inhalation	LC50 20 mg/l/4hr/day, Inhalation, Rat
Aniaml data	Not classified as irritating to the skin
Serious eye damage/irritation	Classified as irritating to eyes
Respiratory sensitisation	Not classified as a skin sensitiser
Genotoxicity - in vitro	Does not contain any substances known to be mutagenic
Carcinogenicity	Does not contain any substances known to be carcinogenic
Reproductive toxicity - fertility	Based on available data the classification criteria are not met
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction
STOT - single exposure	Based on available data the classification criteria are not met
STOT- repeated exposure	Based on available data the classification criteria are not met
Aspiration hazard	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

General information	Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
Inhalation	Vapours/aerosol spray may irritate the respiratory system. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system. Overexposure may depress the central nervous system, causing dizziness and intoxication. Extensive use of the product in area with inadequate ventilation may result in the accumulation of hazardous vapour concentrations.
Ingestion	May cause discomfort if swallowed. Gastrointestinal symptoms, including upset stomach. May cause nausea, headache, dizziness and intoxication. Diarrhoea.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Product has a defatting effect on the skin. May cause skin sensation or allergic reactions in sensitive individuals.
Eye contact	Causes serious eye irritation. Repeated exposure may cause chronic eye infection.
Acute and chronic health hazards	Irritating to eyes.
Route of entry	Inhalation, Ingestion, Skin and/or eye contact.
Target organs	Central nervous system. Eyes, Gastro-intestinal tract, Skin
Medical Symptoms	CNS depression. Confusion, agitation and/or excitation. Gastrointestinal symptoms, including upset stomach. Diarrhoea. Dizziness. Intoxication. Nausea, vomiting. Irritation of eyes and mucous membranes.
Medical Considerations	History of alcoholism. Central nervous system depression. Splash in eye requires examination by specialist. Persons with rash are directed to skin expert for examination of allergic eczema.

METHANOL**This product is classified as toxic.**

Acute toxicity - oral	LD50 1187-2769 mg/kg, Oral, Rat. Classified as toxic. There is a marked difference in accurate oral toxicity between animals and man, man being more susceptible than animals. The estimated fatal dose for man is 100ml ATE Oral - 100.0 mg/kg
Acute toxicity - dermal	LD50 2000 mg/kg, Dermal, Rat. Classified as toxic. ATE - 300 mg/kg
Acute toxicity - inhalation	LC50 130 mg/l Inhalation, Rat. Classified as toxic. High concentrations may cause CNS depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death ATE inhalation 3.0
Aniaml data	Not classified as irritating to the skin
Serious eye damage/irritation	Classified as irritating to eyes
Respiratory sensitisation	Not classified as a respiratory sensitiser
Genotoxicity - in vitro	Does not contain any substances known to be mutagenic
Carcinogenicity	Does not contain any substances known to be carcinogenic
Reproductive toxicity - fertility	Based on available data the classification criteria are not met
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction
STOT - single exposure	LOAEL 2000 mg/kg, Oral, Rat Target organs - Eyes
STOT- repeated exposure	NOAEC 0.13 mg/l/6hr/day, Inhalation, Rat Target organs - Heart and cardiovascular system, brain, liver
Aspiration hazard	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
General information	Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
Inhalation	Toxic if inhaled. Vapours/aerosol spray may irritate the respiratory system. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea. When working extensively on big surfaces in small and badly ventilated rooms, vapours may develop in concentrations which may cause headache and irritation to the eyes and the respiratory system.
Ingestion	Toxic: Danger of very serious irreversible effects if swallowed. Gastrointestinal symptoms, including upset stomach. May cause nausea, headache, dizziness and intoxication. Diarrhoea.

Skin contact	Toxic: danger of serious damage to health by prolonged exposure in contact with skin. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Product has a defatting effect on the skin. May cause skin sensation or allergic reactions in sensitive individuals.
Eye contact	May be slightly irritating to eyes. May cause discomfort. Vapour or spray in the eyes may cause irritation and smarting.
Route of entry	Inhalation, Ingestion, Skin and/or eye contact.
Target organs	Central nervous system. Eyes, Gastro-intestinal tract, Skin
Medical Symptoms	Drowsiness, dizziness, disorientation, vertigo. Intoxication. Symptoms following over exposure to dust may include the following: Irritability. Headache. Nausea, vomiting. CNS depression. Irritation of eyes and mucous membrane.
Medical Considerations	In humans, over-exposure to methanol can result in blindness and metabolic acidosis. There is a marked difference in acute oral toxicity between animals and man, man being more susceptible than animals. The estimate mean fatal does = 300mg/kg for an adult.

PYROLIGNEOUS ACIDS

Acute toxicity - oral	No information available
Acute toxicity - dermal	No information available
Acute toxicity - inhalation	Not available
Aniaml data	
Serious eye damage/irritation	Not available
Skin sensitisation	Not available
Respiratory sensitisation	Not classified as a respiratory sensitiser
Genotoxicity - in vitro	No information available
Carcinogenicity	No information available
Reproductive toxicity - fertility	No information available
Reproductive toxicity - development	No information available
General information	Vapours may irritate throat/respiratory system. Systems following over exposure may include the following: Headache, dizziness, drowsiness. Extensive use of the product in areas with inadequate ventilation may result in the accumulation of hazardous vapour concentrations. May cause eye and respiratory system irritation. Symptoms following over exposure may include the following: Headache.

Inhalation	Vapours may irritate throat and respiratory system and cause coughing
Ingestion	Harmful if swallowed.
Skin contact	May be absorbed through the skin. Irritating to skin
Eye contact	May cause severe irritation to eyes.
Acute and chronic health hazards	No information available
Route of entry	No information available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Toxicity:

ETHANOL

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Acute toxicity - Fish	LC50, 48 hours, 100mg/l <i>Leuciscus idus</i> (Golden Orfe) Practically non toxic
Acute toxicity - Aquatic invertebrates	LC50, 48 hours, 100 mg/l, <i>Daphnia Magna</i> . Practically non toxic
Acute toxicity - Aquatic plants	EC50, 48 hours: 100 mg/l, <i>Selenastrum capricornutum</i> . Not classified as dangerous to the environment

METHANOL

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Acute toxicity - Fish	LC50, 96 hours, 15,400 mg/l, <i>Lepomis macrochirus</i> (Bluegill) Not considered dangerous to the environment.
Acute toxicity - Aquatic invertebrates	LC50, 48 hours: >1000 mg/l, <i>Daphnia Magna</i> Not considered dangerous to the environment.
Acute toxicity - Aquatic plants	EC50, 96 hours: 22000 mg/l, <i>Selenastrum capricornutum</i> . Not considered dangerous to the environment.

PYROLIGNEOUS ACIDS

Acute toxicity - Fish	Not available
Acute toxicity - Aquatic invertebrates	Not available.
Acute toxicity - Aquatic plants	Not available

12.2 Persistence and degradability

Ethanol and Methanol are readily biodegradable.

12.3 Bioaccumulative potential

log Pow: - 0.35

Ethanol, Methanol and Pyrolygneous acids do not bioaccumulate significantly.

12.4 Mobility in soil

Methanol contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. The product is water soluble and may spread in water systems. This product will dissolve rapidly in water. Large volumes may penetrate soil and could contaminate groundwater.

Ethanol is water soluble and may spread in water systems. Large volumes may penetrate soil and could contaminate ground water. If product enters soil it will be mobile and may contaminate groundwater.

There is no data available for **Pyrolygneous acids**.

12.5 Results of PBT and vPvB assessment

Ethanol and Methanol are not classified as PBT or vPvB according to EU criteria.

Other adverse effects

Ethanol and Methanol contain volatile organic compounds which have a photochemical ozone creation potential.

There is no data available for **Pyrolygneous acids**.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority. Contaminated packages must be completely emptied before sending away for laundering and re-use. Waste, residue, empty containers, discarded work clothes and used disposable towels must be collected in designated receptacles, labelled with content. When handling waste, the safety precautions applying to handling of the product should be considered.

Contaminated packaging

Dispose of waste and residues in accordance with local authority requirements. Confirm disposal procedures with environmental engineer and local regulations. Do not allow runoff to sewer, waterway or ground. Contact specialist disposal companies.

SECTION 14: Transport information

14.1 UN number

1170

14.2 UN proper shipping name

Ethanol (Ethyl Alcohol) or Ethanol Solution (Ethyl Alcohol Solution)

14.3 Transport hazard class(es)

3

14.4 Packaging group

II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

EmS F-E, S-D

Emergency Action Code 2YE

Hazard Identification Number 33

Tunnel restriction code (D/E)

14.7

Transporting in bulk according to Annex II of MARPOL73/78 and the IBC code.

Cat Z

SECTION 15: Regulatory information

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

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

Health and Safety at Work etc. Act 1974 (as amended).

Control of Substances Hazardous to Health Regulations 2002 (as amended).

Dangerous Substances and Explosive Atmospheres Regulations 2002.

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/9 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

Health and safety at Work Act (As Amended) 1974 Control of Substances Hazardous to Health Regulations 2002 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 ("CDG 2009"), SI 2009 No 1348. Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.

Guidance

Workplace Exposure Limits EH40.

Introduction to Local Exhaust Ventilation HS(G)37.

Safety Data Sheets for Substances and Preparations.

Authorisation (Title VII Regulation 1907/2006)

No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions on use are known for this product.

15.2 Chemical Safety Assessment

A chemical safety assessment has been carried out on the components.

SECTION 16: Other information

Further information

Key Literature references and sources for data.

Dangerous Properties of Industrial Materials Report, N. Sax et. Al. Registry of Toxic Effects of Chemical Substances (RTECS). ECHA

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SDS status Approved

Risk phrases in full Not classified
R10 Flammable
R11 Highly flammable
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed
R21 Harmful in contact with skin
R22 Harmful if swallowed
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed
R36/37/38 Irritating to eyes, respiratory system and skin.
R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

Hazard phrases in full H225 Highly flammable liquid and vapour
H226 Flammable liquid and vapour
H301 Toxic if swallowed
H302 Harmful if swallowed
H311 Toxic in contact with skin
H312 Harmful in contact with skin
H315 Causes skin irritation
H319 Causes serious eye irritation
H331 Toxic if inhaled
H332 Harmful if inhaled
H335 May cause respiratory irritation
H370 Causes damage to organs
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 companys 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.