

**SAFETY DATA SHEET**  
INDUSTRIAL DENATURED ALCOHOL (IDA)

**Revision Date:** 08/09/2022

**Revision No:** 2

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

**1.1. Product identifier**

**Product name** INDUSTRIAL DENATURED ALCOHOL (IDA)  
**Chemical name** DENATURED ETHANOL  
**Product number**  
**REACH registration notes** ALL COMPONENTS HAVE BEEN REGISTERED

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

**Identified uses** Manufacture of substance Distribution of substance Formulation & (re)packing of substances and mixtures Uses in coatings Uses in cleaning agents Laboratory agents De-icing and anti-icing applications Use as a functional fluid Other consumer uses  
**Uses advised against** This product is not recommended for any industrial, professional or consumer uses other than those identified above.

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

**Supplier** Vet Way Ltd  
Airfield Business Park  
Elvington  
York  
YO41 4EA  
**Tel** +44 (0) 1904 607 600  
**Email** info@vet-way.com  
**Website** www.vet-way.com

**1.4. Emergency telephone number**

**Emergency telephone** +44 (0) 1904 607 600

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification (EC 1272/2008)**

**Physical hazards** Flam. Liq. 2 - H225  
**Health hazards** Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Eye Irrit. 2 - H319  
**Environmental hazards** Not Classified

## INDUSTRIAL DENATURED ALCOHOL (IDA)

**Human health** Irritating to eyes. May cause serious eye damage. Harmful in contact with skin Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Harmful by inhalation In high concentrations, vapours may be irritating to the respiratory system. In high concentrations, vapours and spray mists are narcotic 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. Harmful if swallowed See Section 11 for additional information on health hazards.

**Environmental** Not considered as an environmental hazard according to CLP criteria

**Physicochemical** The 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

#### Pictogram



**Signal word** Danger

**Hazard statements** H225 Highly flammable liquid and vapour.  
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
H319 Causes serious eye irritation.

**Precautionary statements** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
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. Continue rinsing.  
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.  
P501 Dispose of contents/ container in accordance with national regulations.

**Contains** ETHANOL , 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.  
P243 Take precautionary measures against static discharge.  
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+P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P321 Specific treatment (see medical advice on this label).  
P330 Rinse mouth.  
P337+P313 If eye irritation persists: Get medical advice/ attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P403+P235 Store in a well-ventilated place. Keep cool.

### 2.3. Other hazards

## INDUSTRIAL DENATURED ALCOHOL (IDA)

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

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<b>ETHANOL</b>	<b>60-100%</b>
CAS number: 64-17-5	EC number: 200-578-6
	REACH registration number: 01-2119457610-43-XXXX
<b>Classification</b>	
Flam. Liq. 2 - H225	
Eye Irrit. 2 - H319	
<b>METHANOL</b>	<b>1-5%</b>
CAS number: 67-56-1	EC number: 200-659-6
	REACH registration number: 01-2119433307-44-XXXX
<b>Classification</b>	
Flam. Liq. 2 - H225	<b>Classification (67/548/EEC or 1999/45/EC)</b>
Acute Tox. 3 - H301	F;R11 T;R23/24/25,R39/23/24/25
Acute Tox. 3 - H311	
Acute Tox. 3 - H331	
STOT SE 1 - H370	
<b>METHYLAL PURE</b>	<b>&lt;1%</b>
CAS number: 109-87-5	EC number: 203-714-2
	REACH registration number: 01-2119664781-31-XXXX
<b>Classification</b>	
Flam. Liq. 2 - H225	<b>Classification (67/548/EEC or 1999/45/EC)</b>
	F;R11.

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

**Composition comments**      The data shown are in accordance with the latest EC Directives.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	Keep affected person under observation. Effects may be delayed. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	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 medical attention if symptoms are severe or persist. Show this Safety Data Sheet to the medical personnel.
<b>Ingestion</b>	Get medical attention immediately. Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Keep affected person under observation. Show this Safety Data Sheet to the medical personnel.

## INDUSTRIAL DENATURED ALCOHOL (IDA)

<b>Skin contact</b>	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.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

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

<b>General information</b>	Get medical attention immediately. The casualty should be transferred to hospital as soon as possible.
<b>Inhalation</b>	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. Overexposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death.
<b>Ingestion</b>	Gastrointestinal symptoms, including upset stomach. Diarrhoea. Nausea, vomiting.
<b>Skin contact</b>	Prolonged contact may cause redness, irritation and dry skin. Product has a defatting effect on skin.
<b>Eye contact</b>	Causes serious eye irritation. Immediate first aid is imperative. Vapour or spray in the eyes may cause irritation and smarting.

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

<b>Notes for the doctor</b>	No specific recommendations.
<b>Specific treatments</b>	No specific chemical antidote is known to be required after exposure to this product.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire. Nonalcohol resistant foam

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	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 and in low-lying areas. Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Vapours may be ignited by a spark, a hot surface or an ember.
<b>Hazardous combustion products</b>	Oxides of carbon. Acrid smoke or fumes.

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	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 discoloration 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. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
---	---

## INDUSTRIAL DENATURED ALCOHOL (IDA)

**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. Use protective equipment appropriate for surrounding materials.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid inhalation of vapours and contact with skin and eyes. 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

**Environmental precautions** Environmental Manager must be informed of all major spillages. Do not discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

#### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Stop leak if possible without risk. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Avoid the spillage or runoff entering drains, sewers or watercourses. Take care as floors and other surfaces may become slippery. Contain spillage with sand, earth or other suitable non-combustible material. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of contents/container in accordance with international regulations. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents.

#### 6.4. Reference to other sections

**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

**Usage precautions** Keep away from heat, sparks and open flame. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours and spray/mists. Avoid spilling. Avoid release to the environment. Use explosion-proof electrical, ventilating and lighting equipment. Use only in well-ventilated areas. Use suitable respiratory protection if ventilation is inadequate. Take precautionary measures against static discharge. Earth container and transfer equipment to eliminate sparks from static electricity. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 10$  m/sec). AVOID splash filling Do not use compressed air for filling or discharging operations

**Advice on general occupational hygiene** Eye wash facilities and emergency shower must be available when handling this product. 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. Clean equipment and the work area every day. Contaminated clothing should be placed in a closed container for disposal or decontamination.

#### 7.2. Conditions for safe storage, including any incompatibilities

## INDUSTRIAL DENATURED ALCOHOL (IDA)

**Storage precautions** Keep away from oxidising materials, heat and flames. Store in tightly-closed, original container in a well-ventilated place. Bund storage facilities to prevent soil and water pollution in the event of spillage. Earth container and transfer equipment to eliminate sparks from static electricity. Storage tanks and other containers must be earthed. Keep away from food, drink and animal feeding stuffs. Only store in correctly labelled containers. Suitable container materials: Carbon steel. Mild steel. Stainless steel. Unsuitable containers: copper, zinc, aluminium, copper alloy, zinc alloy, aluminium alloy. May attack some plastics, rubber and coatings.

**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/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL

##### METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 266 mg/m<sup>3</sup>(Sk)

Short-term exposure limit (15-minute): WEL 250 ppm(Sk) 333 mg/m<sup>3</sup>(Sk)

##### METHYLAL PURE

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 3160 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 1250 ppm 3950 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

**Ingredient comments** WEL = Workplace Exposure Limits

#### ETHANOL (CAS: 64-17-5)

<b>Ingredient comments</b>	WEL = Workplace Exposure Limits
<b>DNEL</b>	Industry - Inhalation; Short term local effects: 1900 mg/m <sup>3</sup> Industry - Dermal; Long term systemic effects: 343 mg/kg/day Industry - Inhalation; Long term systemic effects: 950 mg/m <sup>3</sup> Consumer - Inhalation; Short term local effects: 950 mg/m <sup>3</sup> Consumer - Dermal; Long term systemic effects: 206 mg/kg/day Consumer - Inhalation; Long term systemic effects: 114 mg/m <sup>3</sup> Consumer - Oral; Long term systemic effects: 87 mg/kg/day
<b>PNEC</b>	Industry - Fresh water; Long term 0.96 mg/l Industry - Marine water; Long term 0.79 mg/l Industry - Intermittent release; Long term 2.75 mg/l Industry - STP; Long term 580 mg/l Industry - Sediment (Freshwater); Long term 3.6 mg/kg Industry - Sediment (Marinewater); Long term 2.9 mg/kg Industry - Soil; Long term 0.63 mg/kg

#### METHANOL (CAS: 67-56-1)

**Ingredient comments** WEL = Workplace Exposure Limits

## INDUSTRIAL DENATURED ALCOHOL (IDA)

<b>DNEL</b>	Industry - Dermal; Short term systemic effects: 40 mg/kg/day
	Industry - Inhalation; Short term systemic effects: 260 mg/m <sup>3</sup>
	Industry - Dermal; Long term systemic effects: 40 mg/kg/day
	Industry - Inhalation; Long term systemic effects: 260 mg/m <sup>3</sup>
	Consumer - Dermal; Short term systemic effects: 8 mg/kg/day
	Consumer - Inhalation; Short term systemic effects: 50 mg/m <sup>3</sup>
	Consumer - Oral; Short term systemic effects: 8 mg/kg/day
	Consumer - Dermal; Long term systemic effects: 8 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 50 mg/m <sup>3</sup>	

<b>PNEC</b>	Industry - Fresh water; Long term 20.8 mg/l
	Industry - Marine water; Long term 2.08 mg/l
	Industry - Intermittent release; Long term 1540 mg/l
	Industry - STP; Long term 100 mg/l
	Industry - Sediment (Freshwater); Long term 77 mg/kg
	Industry - Sediment (Marinewater); Long term mg/kg
Industry - Soil; Long term mg/kg	

### METHYLAL PURE (CAS: 109-87-5)

<b>DNEL</b>	Industry - Dermal; Long term systemic effects: 22 mg/kg/day
	Industry - Inhalation; Long term systemic effects: 132 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 5.7 mg/kg/day
	General population - Inhalation; Long term systemic effects: 39 mg/m <sup>3</sup>
General population - Oral; Long term systemic effects: 9.6 mg/kg/day	

<b>PNEC</b>	Industry - Fresh water; Long term 14,577 mg/l
	Industry - Marine water; Long term 1,477 mg/l
	Industry - STP; Long term 1.00 E4 mg/l
	Industry - Sediment (Freshwater); Long term 13,135 mg/kg
	Industry - Sediment (Marinewater); Long term 1,314 mg/kg
Industry - Soil; Long term 4,654 mg/kg	

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Ensure the ventilation system is regularly maintained and tested. Use explosion-proof electrical, ventilating and lighting equipment. This product must not be handled in a confined space without adequate ventilation. In case of insufficient ventilation, wear suitable respiratory 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 EN166.

## INDUSTRIAL DENATURED ALCOHOL (IDA)

<b>Hand protection</b>	Wear protective gloves. The selected gloves should have a breakthrough time of at least 8 hours. It is recommended that gloves are made of the following material: Butyl rubber. Polyethylene. Viton rubber (fluoro rubber). For short-term / splash protection the following are recommended Neoprene. To protect hands from chemicals, gloves should comply with European Standard EN374. 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.
<b>Other skin and body protection</b>	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station and safety shower.
<b>Hygiene measures</b>	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.
<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapour filter. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Gas and combination filter cartridges should comply with European Standard EN14387. Change filter cartridge on respirator daily. Check that the respirator fits tightly and the filter is changed regularly. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. When spraying, wear a suitable supplied-air respirator.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Alcoholic
<b>Melting point</b>	- 114°C
<b>Initial boiling point and range</b>	78°C @ 1013 hPa
<b>Flash point</b>	12°C CC (Closed cup).
<b>Evaporation rate</b>	3.4 BuAc=1
<b>Upper/lower flammability or explosive limits</b>	Lower flammable/explosive limit: 2.5 % V Upper flammable/explosive limit: 13.5 % V
<b>Vapour pressure</b>	5.8 kPa @ °C
<b>Vapour density</b>	1.03
<b>Bulk density</b>	0.79 - 0.81 kg/l @ 20°C
<b>Solubility(ies)</b>	Soluble in water. Miscible with the following materials: Organic solvents.
<b>Partition coefficient</b>	log Pow: - 0.35
<b>Auto-ignition temperature</b>	363°C
<b>Viscosity</b>	1.2 mPa s @ 20°C

#### 9.2. Other information



## INDUSTRIAL DENATURED ALCOHOL (IDA)

<b>Other information</b>	Not available.
<b>Volatile organic compound</b>	This product contains a maximum VOC content of 100% .

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity** The following materials may react with the product: Strong oxidising agents. Strong acids

#### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended.

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Reacts with strong acids Reacts with strong oxidising agents

#### 10.4. Conditions to avoid

**Conditions to avoid** Avoid heat, flames and other sources of ignition. Avoid heat. Avoid contact with the following materials: Strong oxidising agents. Avoid contact with acids.

#### 10.5. Incompatible materials

**Materials to avoid** Strong oxidising agents. Strong acids. Alkali metals. Acid anhydrides.

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Oxides of carbon. Acid smoke or fumes.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity - oral

**ATE oral (mg/kg)** 500.0

##### Acute toxicity - dermal

**ATE dermal (mg/kg)** 1,100.0

##### Acute toxicity - inhalation

**ATE inhalation (vapours mg/l)** 11.0

#### Toxicological information on ingredients.

#### ETHANOL

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> 10,470 mg/kg, Oral, Rat

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> 17,100 mg/kg, Dermal, Rabbit

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** LC<sub>50</sub> 124.7 mg/l/4hr/day, Inhalation, Rat

##### Skin corrosion/irritation

**Animal data** Not classified as irritating to skin

##### Serious eye damage/irritation

## INDUSTRIAL DENATURED ALCOHOL (IDA)

<b>Serious eye damage/irritation</b>	Classified as irritating to eyes
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Not classified as a respiratory sensitiser
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Not classified as a skin sensitiser
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Does not contain any substances known to be mutagenic.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Does not contain any substances known to be carcinogenic.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	This substance has no evidence of toxicity to reproduction.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
<b><u>General information</u></b>	
<b>General information</b>	Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
<b>Inhalation</b>	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 areas with inadequate ventilation may result in the accumulation of hazardous vapour concentrations.
<b>Ingestion</b>	May cause discomfort if swallowed. Gastrointestinal symptoms, including upset stomach. May cause nausea, headache, dizziness and intoxication. Diarrhoea.
<b>Skin contact</b>	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Product has a defatting effect on skin. May cause skin sensitisation or allergic reactions in sensitive individuals.
<b>Eye contact</b>	Causes serious eye irritation. Repeated exposure may cause chronic eye irritation. Risk of serious damage to eyes.
<b>Acute and chronic health hazards</b>	Irritating to eyes.
<b>Route of entry</b>	Inhalation Ingestion Skin and/or eye contact

## INDUSTRIAL DENATURED ALCOHOL (IDA)

<b>Target organs</b>	Central nervous system Eyes Gastro-intestinal tract Skin
<b>Medical symptoms</b>	Central nervous system depression. Confusion, agitation and/or excitation. Gastrointestinal symptoms, including upset stomach. Diarrhoea. Dizziness. Intoxication. Nausea, vomiting. Irritation of eyes and mucous membranes.
<b>Medical considerations</b>	History of alcoholism. Central nervous system depression. Splash in eye requires examination by eye specialist. Persons with rash are directed to skin expert for examination of allergic eczema.

### METHANOL

<b>Toxicological effects</b>	This product is toxic.
<b><u>Acute toxicity - oral</u></b>	
<b>Notes (oral LD<sub>50</sub>)</b>	LD <sub>50</sub> 1187 - 2769 mg/kg, Oral, Rat Classified as toxic There is a marked difference in acute oral toxicity between animals and man, man being more susceptible than animals. The estimated fatal dose for man is 100 millilitres (1/2 cup)
<b>ATE oral (mg/kg)</b>	100.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Notes (dermal LD<sub>50</sub>)</b>	LD <sub>50</sub> 17100 mg/kg, Dermal, Rabbit Classified as toxic
<b>ATE dermal (mg/kg)</b>	300.0
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	LC <sub>50</sub> 128.2 mg/l, Inhalation, Rat Classified as toxic High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death
<b>ATE inhalation (vapours mg/l)</b>	3.0
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Not classified as irritating to skin
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Not classified as irritating to eyes
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Not classified as a skin sensitizer
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Does not contain any substances known to be mutagenic.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Does not contain any substances known to be carcinogenic.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	LOAEL 2000 mg/kg, Oral, Rat

## INDUSTRIAL DENATURED ALCOHOL (IDA)

<b>Target organs</b>	Eyes
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	NOAEC 0.13 mg/l/6hr/day, Inhalation, Rat
<b>Target organs</b>	Heart and cardiovascular system Brain Liver
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
.	
<b>General information</b>	Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
<b>Inhalation</b>	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 of the eyes and the respiratory system.
<b>Ingestion</b>	Toxic: danger of very serious irreversible effects if swallowed. Gastrointestinal symptoms, including upset stomach. May cause nausea, headache, dizziness and intoxication. Diarrhoea.
<b>Skin contact</b>	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. May cause skin sensitisation or allergic reactions in sensitive individuals.
<b>Eye contact</b>	May be slightly irritating to eyes. May cause discomfort. Vapour or spray in the eyes may cause irritation and smarting.
<b>Route of entry</b>	Inhalation Ingestion. Skin and/or eye contact
<b>Target organs</b>	Central nervous system Eyes Gastro-intestinal tract Skin
<b>Medical symptoms</b>	Drowsiness, dizziness, disorientation, vertigo. Intoxication. Symptoms following overexposure to dust may include the following: Irritability. Headache. Nausea, vomiting. Central nervous system depression. Irritation of eyes and mucous membranes.
<b>Medical considerations</b>	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 dose = 300 mg/kg for an adult.

### SECTION 12: Ecological Information

#### Ecological information on ingredients.

##### ETHANOL

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

##### METHANOL

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

## INDUSTRIAL DENATURED ALCOHOL (IDA)

### 12.1. Toxicity

#### Ecological information on ingredients.

#### ETHANOL

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 13,000 mg/l, Onchorhynchus mykiss (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	LC <sub>50</sub> , 48 hours: 12,340 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 48 hours: 12,900 mg/l, Selenastrum capricornutum
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 4 hours: 5,800 mg/l, Activated sludge
<b>Chronic toxicity - fish early life stage</b>	NOEC, 24 days: > 0.08 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 10 days: 9.6 mg/l, Daphnia magna

#### METHANOL

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 15400 mg/l, Lepomis macrochirus (Bluegill) Not classified as dangerous to the environment
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: > 1000 mg/l, Daphnia magna Not classified as dangerous to the environment
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 96 hours: 22000 mg/l, Selenastrum capricornutum Not classified as dangerous to the environment

### 12.2. Persistence and degradability

#### Ecological information on ingredients.

#### ETHANOL

<b>Persistence and degradability</b>	The product is biodegradable. Oxidises rapidly by photochemical reactions in air.
<b>Biological oxygen demand</b>	1,000 mg/g
<b>Chemical oxygen demand</b>	1,900 mg/g

#### METHANOL

<b>Persistence and degradability</b>	The product is readily biodegradable. Oxidises rapidly by photochemical reactions in air.
--------------------------------------	---

### 12.3. Bioaccumulative potential

**Partition coefficient**                      log Pow: - 0.35

#### Ecological information on ingredients.

#### ETHANOL

<b>Bioaccumulative potential</b>	Does not bioaccumulate significantly
<b>Partition coefficient</b>	log Pow: - 0.35

## INDUSTRIAL DENATURED ALCOHOL (IDA)

### METHANOL

**Bioaccumulative potential** Does not bioaccumulate significantly

**Partition coefficient** log Pow: - 0.8

#### 12.4. Mobility in soil

##### Ecological information on ingredients.

### ETHANOL

**Mobility** The product is water-soluble and may spread in water systems. Large volumes may penetrate soil and could contaminate groundwater. If product enters soil it will be mobile and may contaminate groundwater.

**Henry's law constant**  $3.3 \times 10^{-6} \text{ atm m}^3/\text{mol @ } ^\circ\text{C}$

**Surface tension** 24.5 mN/m @ 20°C

### METHANOL

**Mobility** The product is water-soluble and may spread in water systems. Large volumes may penetrate soil and could contaminate groundwater. The product is poorly adsorbed onto soils or sediments.

#### 12.5. Results of PBT and vPvB assessment

##### Ecological information on ingredients.

### ETHANOL

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### METHANOL

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects

##### Ecological information on ingredients.

### ETHANOL

**Other adverse effects** The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential.

### METHANOL

**Other adverse effects** The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** 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. When handling waste, the safety precautions applying to handling of the product should be considered.

## INDUSTRIAL DENATURED ALCOHOL (IDA)

### Disposal methods

Collect and place in suitable waste disposal containers and seal securely. Empty containers or liners may retain some product residues and hence be potentially hazardous. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. 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. Confirm disposal procedures with environmental engineer and local regulations. Avoid the spillage or runoff entering drains, sewers or watercourses.

### SECTION 14: Transport information

#### 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

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.

## INDUSTRIAL DENATURED ALCOHOL (IDA)

### 14.6. Special precautions for user

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 Pollution category: Cat Z

## SECTION 15: Regulatory information

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

<b>National regulations</b>	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"].
<b>EU legislation</b>	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). 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 (as amended). 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.
<b>Guidance</b>	Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. Safety Data Sheets for Substances and Preparations.
<b>Authorisations (Title VII Regulation 1907/2006)</b>	No specific authorisations are known for this product.
<b>Restrictions (Title VIII Regulation 1907/2006)</b>	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

<b>Key literature references and sources for data</b>	Dangerous Properties of Industrial Materials Report, N.Sax et.al. ECHA Registry of Toxic Effects of Chemical Substances (RTECS).
---	--



## INDUSTRIAL DENATURED ALCOHOL (IDA)

### Risk phrases in full

R10 Flammable.  
R11 Highly flammable.  
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R21 Harmful in contact with skin.  
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 statements in full

H225 Highly flammable liquid and vapour.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H312 Harmful in contact with skin.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H332 Harmful if inhaled.  
H370 Causes 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.