

# NIGHTINGALE SUPPLY

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## MATERIAL SAFETY DATA SHEET

**CLASSIFIED AS HAZARDOUS ACCORDING TO CRITERIA OF  
WORKSAFE AUSTRALIA**

### IDENTIFICATION SECTION:

Product Name : **INDUSTRIAL METHYLATED SPIRITS**  
Other Names: DENATURED ETHANOL, ETHANOL (ETHYL ALCOHOL), ETHANOL SOLUTIONS (ETHYL ALCOHOL SOLUTIONS).  
U.N. Number : 1170  
Dangerous Goods Class : 3 FLAMMABLE LIQUID  
& Subsidiary Risk : none allocated  
Hazchem Code : 2 (S) E  
Packaging Group : 11  
Poison Schedule : S5

Uses: General Industrial solvent.

### PHYSICAL DESCRIPTION / PROPERTIES:

Appearance : Clear, colourless liquid, characteristic odour burning taste.  
Boiling Point : 78.3°C  
Melting Point : -117.3°C  
Vapour pressure : 58.1 mbar:20°C  
Specific Gravity : 0.7904  
Flash Point : 13°C (closed cup)  
Flammability Limits : LEL: 3.5% UEL: 19.0%  
Solubility in water : COMPLETE

#### **Other Properties:**

Percent volatiles by volume : 100%  
Reactivity with common Substances : reacts with oxidizing agents, organic peroxides and strong acids.  
Autoignition temperature : 392°C  
Evaporative rate: (n-butyl acetate=1) : 2.53  
Vapour density: (air=1) : 1.59  
Solubility in organic solvents : miscible

## **MSDS: INDUSTRIAL METHYLATED SPIRITS**

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### **INGREDIENTS:**

Chemical Name	CAS Number	Proportion
Ethyl Alcohol (Ethanol)	64-17-5	93.7 – 96.7%
Denaturant (See Health Effects)		< 2.0%
Water		4.3 – 3.3%

### **HEALTH HAZARD INFORMATION:**

#### **Health Effects:**

#### ***Acute Effects:***

**Skin:** Contact with skin may result in severe irritation. Brief contact may cause redness. Repeated or prolonged contact may lead to dermatitis.

**Eyes:** Vapours may irritate the eyes. Liquid and mists may severely irritate or damage the eyes.

**Inhalation:** Moderately irritating to the respiratory tract and mucous membranes. Inhalation of the vapour may result in headaches, nausea and vomiting. High concentrations may cause unconsciousness. Prolonged exposure may cause somnolence and narcosis.

**Swallowed:** May cause headache, dizziness, dullness, gastric disorders, symptoms of central nervous system depression and optic nerve (visual) damage.

#### **NOTE:**

The use of ethanol is controlled by the Bureau of Customs and for almost all industrial application it is required to be denatured (methylated) by the addition of approved substances. Such denaturing renders the ethanol unfit for drinking purposes. The denaturants may be one or more of the following: diethyl phthalate, tertiary butyl alcohol, brucine sulphate, denatonium benzoate, methyl isobutyl ketone, methanol or fluorescein. The denaturants never exceed 2.0% of the final product and at this low concentration will not alter the safety of the product.

#### **First Aid Facilities:**

If poisoning occurs, contact a doctor or Poisons Information Centre on 131126.  
If swallowed and if then 15 minutes from a hospital, induce vomiting preferably using Ipecac Syrup A.P.F.

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### **PRECAUTIONS FOR USE:**

<b>Exposure Standards:</b>	The recommended Worksafe Exposure Standards are:	
Ethyl Alcohol	TWA 1000 ppm (1880 mg/m <sup>3</sup> )	STEL
<b>Engineering Controls: Segregation of Processes from Personnel:</b>	Do not generate spray or mist without adequate ventilation. Avoid breathing vapour. Use in a well ventilated area.	
<b>Vessel Containment Controls:</b>	Use bonding of earth connection when transferring product.	
Enclosure of Sources of Substances:	Keep away from sources of heat or ignition.	
Capture of Substances at Source and Disposal with Local exhaust ventilation:		
Dilution Ventilation:	Store in a well ventilated area in accordance with AS 1940.	
<b>Personal Protection: Respirator Type (AS 1716):</b>	<b>Not required under normal circumstances. If ventilation is Inadequate, the wearing of an Organic Vapour Respirator Complying with AS 1716.</b>	
<b>Glove Type:</b>	<b>The wearing of PVC, Nitrile or Neoprene gloves complying With AS 2161 is recommended.</b>	
<b>Eye Protection:</b>	<b>Where splashing or spray mist is likely to occur, the wearing of Chemical Safety Goggles complying with AS 1337 is recommended.</b>	
<b>Clothing:</b>	<b>Cotton overalls done up consisting of long sleeve and trousers.</b>	
<b>Other:</b>	<b>Approved barrier creams may prove useful in preventing Dermatitis. Leather boots with rubber sole. If likely to come in contact with liquid – include – goggles or face shield PVC gloves, PVC apron and sleeves, PVC or rubber boots.</b>	
Flammability <b>Fire Hazards</b>	<b>Flammable liquid with hazardous decomposition products on burning (carbon oxides, soot and smoke).</b>	
<b>Ventilation:</b>	<b>Requires adequate ventilation to avoid build up of vapour.</b>	
<b>Earthing:</b>	<b>required for all product transfers.</b>	
<b>Sources of Ignition Advice:</b>		
<b>Special Equipment:</b>		
<b>Flameproofing:</b>	<b>Required for other than minor storage in accordance with AS 1960.</b>	
<b>Flameproof Fittings:</b>	<b>All electrical equipment/lighting used in proximity to ethanol Storage/or electrical process equipment used in any process using Ethanol should be selected and installed in accordance with local Wiring rules and following Australian Standards AS3000 (SAA Wiring Rules) AS2380 (Electrical Equipment for Explosive Gas Atmospheres – Explosion Protection Techniques), AS2381 (Parts 1 – 13 “Selection, Installation and Maintenance of Electrical Apparatus and Associated Equipment for use in Explosive Atmospheres”), AS1020 (State Electricity Code).</b>	

**SAFE HANDLING INFORMATION:**

**Storage and Transport:**

UN 1170 PACKAGING GROUP 11  
CLASSIFIED as a Flammable Liquid Dangerous Good  
For the purpose of storage and transport.

Store in a cool place. Store container in well ventilated place. Store away From heat, naked flames, sparks heat or sunlight. Store away from strong oxidizing agents. Keep containers closed at all times.  
Keep away from food, foodstuffs, drink or clothing. Take precautions against static Electricity discharges. Classified as a dangerous substance for transport purposes.  
Flammable Liquid Class 3.  
Apply correct labels if material to be transported.

Bunding:	Impervious.
Security:	Supervised at locked area.
Ventilation:	Natural or mechanical ventilation required.
Temperature Conditions:	Cool and dry.
Protection from weather, Sunlight:	Store in a ventilated area away from heat and Sunlight.
Storage incompatibilities:	Oxidising agents, organic peroxides, strong Acids, food.
Special transport Requirements:	Transport in accordance with ADG Code of Regulations. DO NOT transport damaged or Leaking containers.

**Spills and Disposal:**

Minimising Spills and Leaks:	Extinguish or remove all sources of heat And ignition. Clear area of all unprotected Personnel. Wear appropriate protection Equipment. Refer to ventilation and Personal protection.
Clean Up Spills/Leaks:	Shut off leak if safe to do so. DO NOT smoke During the clean up procedure. Bund and Contain spill with sand or earth but NOT sawdust. Allow to evaporate if conditions permit. Absorb The liquid with sand, earth or other absorbent.

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### Precautions for

#### Clean up:

Wash with copious volumes of water, ethanol  
Mixes completely with water. Place used  
Absorbent in suitable, sealable, labeled  
Containers.

#### Disposal Containers:

Dispose of following under the requirements  
Of state environmental authority. Keep away  
From heat, naked flame or sparks.

#### Disposal Method:

Incinerate under controlled conditions if permitted  
By local authorities. DO NOT flush to drains or  
Sewers.  
Do not contaminate stream, rivers or water  
Courses. Inform local authority if liquid enters  
Drains, sewers, streams etc.

### **Fire/Explosion Hazard:**

#### Hazards of Use/Storage:

Explosive air-vapour mixture may form.  
Explosive when mixed with oxidizing substances.  
Earth and bond all transfer equipment including  
Tanks and drums. Keep away from heat, naked  
flames or sparks. Keep away from oxidizing  
Agents. Have adequate fire equipment available.

### List of Dangerous

#### Decomposition or Combustion Products:

Carbon Oxides, soot and smoke and other  
unidentifiable organic compounds may be formed  
during combustion.

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Fire – fighting Recommendations:

Types of Extinguisher/Fire:

Fighting agents:

Alcohol stable foam, carbon dioxide or dry  
Chemical extinguishers required. For large  
Fires use alcohol stable foam.

Precautions:

Evaluate immediate area. Advise Fire Brigade of  
Hazard. Keep pipelines, containers etc cool with  
Water spray. Fire fighters to wear self-contained  
Breathing apparatus if risk of exposure to products  
Of decomposition. Vapours are heavier than air  
And may travel along the ground, gathering in  
Depressions, resulting in Oxygen deficiency.  
Evacuate immediate area.

Protective clothing:

Wear full protective equipment including  
Breathing apparatus.

Reactivity:

Explosive when mixed with oxidizing substances.

Hazchem Code:

2 (S) E

Risk Phrases:

Highly Flammable

Safety Phrases:

Keep container tightly closed.

Keep away from sources of ignition – No Smoking.

The data in this Material Safety Data Sheet has been compiled from our Suppliers Material Safety Data Sheets. This data relates only to the designated product and not to the use of said product in combination with other materials. Because conditions and circumstances of use of the product are beyond our control and any summary of data such as is represented by this Material Safety Data Sheet is inherently incomplete, Nightingale Supply makes no warranty about the accuracy of the data herein and assume no liability for the use of such data. Responsibility for proper precautions and safe use of the product lies with the user.