



1. IDENTIFICATION

Product: Denatured Spirit (Denatonium Benzoate)
Other identification: Denatured Alcohol
Uses: Pharmaceutical or Industrial, not suitable for human consumption

Manufacturer: Ostra Pty Ltd
Address: 27 – 29 Moore Street, Robinvale, Victoria 3549, Australia

2. HAZARD(S) IDENTIFICATION



Hazard Category: 3 – H226 Flammable liquid and vapour

Prevention: P210 – Keep away from heat/sparks/open flames/hot surfaces.– No smoking.
P233 – Keep container tightly closed.
P240 – Ground/Bond container and receiving equipment
P241 – Use explosion-proof electrical/ventilating/lighting/equipment.
P242 – Use only non-sparking tools.
P243 – Take precautionary measures against static discharge.
P280 – Wear protective gloves/eye protection/face protection

Response: P303 + P361 + P353 – IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Shower/rinse skin with water.
P370 + P378 – In case of fire: Use Alcohol stable foam/Dry chemical powder/Carbon dioxide/Water spray or fog spray.

Storage: P403 + P235 – Store in a well-ventilated place. Keep cool.

Disposal: P501 – Dispose of contents/container to hazardous or special waste collection point.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Name	CAS	Proportion
Ethyl Ethanol	64-17-5	75% - 85%
Water	7732-19-5	25% - 15%
Denatonium Benzoate	3734-33-6	5ppm

4. FIRST AID MEASURES

Eyes:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Gently lift eyelids and flush continuously with water.
Skin:	Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Flush skin with plenty of soap and water.
Ingestion:	Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cups of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation:	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.
Notes to Doctor:	Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.
Antidote:	Replace fluid and electrolytes.

5. FIRE FIGHTING MEASURES

Suitable extinguishing Equipment:	Use carbon dioxide, dry chemical, foam, water fog or water mist. Alcohol resistant foam is preferred. If not available, fine water spray/mist can be used.
Specific Hazards:	Highly flammable liquid and vapour. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. Runoff to sewer may create fire or explosion hazard. Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.
Special protective Equipment and Precautions for Fire fighters:	Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. This product should be prevented from entering drains and watercourses.
Hazchem Code:	·2[Y]E

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, Protective equipment and Emergency procedures:	All personnel involved in the containment and disposal procedure should wear eye protection. In an event where there are high vapour concentrations, wear an approved organic vapour respirator. No smoking.
Environmental Precautions:	Ventilate area well and ensure the atmosphere is safe before personnel return to the work area. Please see below "Methods and Materials for Containment and Clean Up". If contamination of sewers or waterways has occurred advise local emergency services.

**Methods and Materials
For Containment and
Cleaning Up:**

In the event of a spill, eliminate all sources of ignition and take measures to prevent static discharge. No smoking. Stop and contain the spill by using an inert absorbent material (e.g. soil, sand). Dispose of the material by an approved method. Prevent run-off into drains and waterways. Use water spray to disperse vapour. Ensure that the surface (floor) is cleaned thoroughly with water as any product residue may leave the floor slippery. Ensure that the area is thoroughly ventilated.

7. HANDLING AND STORAGE

Handling:

Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapour), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits:

Chemical Name	ACGIH	NOISH	OSHA – Final PELs
Ethanol	1000ppm TWA	1000ppm TWA; 1900 mg/m3 TWA 3300ppm IDLH	1000ppm TWA; 1900mg/m3 TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs:

Ethyl alcohol: 1000 ppm TWA; 1900 mg/m3 TWA Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear liquid

Appearance: Colourless

Odour: Mild, rather pleasant, like Grain

pH: Not available

Vapour Pressure: 59.3 mm Hg @ 20 deg C

Vapour Density:	1.59
Evaporation Rate:	Not available
Viscosity:	1.200 cP @ 20 deg C
Boiling Point:	78 deg C
Freezing/Melting Point:	-114.1 deg C
Flash Point:	13 deg C
Decomposition Temperature:	Not available.
Solubility:	Miscible.
Specific Gravity/Density:	0.790 @ 20°C
Molecular Formula:	C ₂ H ₅ OH
Molecular Weight:	46.0414

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, oxidizers.

Incompatibilities with Other Materials: Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGY INFORMATION

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 3450 mg/kg [Mouse].

Acute toxicity of the vapour (LC50): 39000 mg/m³ 4 hours [Mouse].

Acute Effects:

Swallowed: Accidental swallowing is unlikely in the industrial setting. Swallowing ethanol can cause drunkenness or harmful central nervous system effects. The deliberate ingestion of ethanol is a known occupational risk.

As little of 50 – 100ml intake in a shift in a 70kg worker may cause inebriation to the point where safety is impaired. Effects of a small intake may include excitation, euphoria, headache, dizziness, drowsiness, blurred vision and fatigue.

Drinking a large amount may lead to severe acute intoxication, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death. Aspiration into lungs may cause pneumonitis.

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

Skin: Contact with skin may result in slight irritation and redness.

Inhaled: Vapour is moderately irritating to mucous membranes and respiratory tract. Inhalation of the vapour may result in drunkenness or headache, nausea, incoordination, narcosis (sleepiness) and vomiting.

Early signs or symptoms may occur at airborne levels of 1,000 to 5,000 ppm.

Chronic Effects:

Long term exposure by swallowing or repeated inhalation may cause degenerative change in the liver, kidneys, gastrointestinal tract and heart muscle.

Prolonged or repeated contact and heavy skin contamination may cause skin drying and cracking and/or dermatitis with redness, itching and swelling. This may lead to secondary infection.

Ongoing or repeated exposures at high concentrations may cause central nervous system symptoms similar to “swallowed” above. Deliberate inhalation of the vapour is a known occupational risk.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Ethanol is biodegradable and has not been shown to interfere in any way with waste water treatment plants. In high concentrations it harms fish and plankton. 9,000 mg/l kills fish in 24 hours; threshold for deleterious effects in small crustaceans (Daphnia): upwards of 7,800 mg/l. Toxic threshold concentration: Pseudomonas

putida upwards of 6,500 mg/l, Scenedesmus quadricauda upwards of 5,000 mg/l, Microsystis aeruginosa upwards of 1,450 mg/l. Fish toxicity: LC50>10,000 mg/l.

Environmental: When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.

13. DISPOSAL CONSIDERATIONS

Suitable for incineration by approved agent under controlled conditions if permitted by local authorities, otherwise disposal must be in accordance with local waste authority requirements.

Product must be contained and not disposed to sewerage systems, drains or waterways. Advise flammable nature.

Empty containers must be decontaminated by rinsing with water.

14. TRANSPORT INFORMATION

UN Number:	1170
Proper Shipping Name:	ETHANOL
Transport Hazard Class:	3
Packing Group:	III
Environmental Hazards:	Not a marine pollutant
Special Precautions for User:	Refer to Section 7 and Section 10.
Additional Information:	NIL
HAZCHEM Code:	·2YE

15. REGULATORY INFORMATION

Not classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia. Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

AICS (Australia): All constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Poisons Schedule: Not Scheduled

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HSNO Approval Number: HSR006424

16. OTHER INFORMATION

Created: 20th March 2020

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- (2) FURNISH THIS SAME INFORMATION TO EACH CUSTOMER FOR THE PRODUCT, AND
- (3) REQUEST CUSTOMERS TO NOTIFY THEIR EMPLOYEES, CUSTOMERS, AND OTHER USERS OF THE PRODUCT OF THIS INFORMATION.