



SAFETY DATA SHEET

DENATURED ETHANOL 100

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: DENATURED ETHANOL 100

Recommended use: Chemical for industrial

Manufacturer/Supplier: **MODERN CHEMICAL CO.,LTD.**
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2. HAZARDS IDENTIFICATION

Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

- 1.) Highly flammable liquid and vapour.
- 2.) Causes skin irritation.
- 3.) May be fatal if swallowed and enters airways.
- 4.) May cause drowsiness or dizziness.
- 5.) Toxic to aquatic life with long lasting effects.
- 6.) May damage the unborn child. Suspected of damaging fertility.

Precautionary statement(s)

- 1.) Keep away from heat/sparks/open flames/hot surfaces. - No smoking.



- 2.) Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- 3.) Avoid release to the environment.
- 4.) IF SWALLOWED: call a doctor/physician. Do NOT induce vomiting.
- 5.) IF IN EYES: Rinse cautiously with water for 15 minutes.
- 6.) IF ON SKIN Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: Ethyl alcohol Denatured 100, Denatured alcohol 100, Ethanol Denatured 100, DEB100

Ingredients	% (w/w)	CAS NO.
DENATURED ETHANOL 100	100	64-17-5

4. FIRST AID MEASURES

General advice:

Show this safety data sheet to the doctor in attendance.

Inhalation:

Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.

Skin contact:

Remove contaminated clothing and wash affected skin with soap and water. Obtain medical attention. If signs of poisoning appear, treat as for inhalation. Wash contaminated clothing before re-use. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.

Eye contact:

If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.

Ingestion:

Rinse mouth. **Do not induce vomiting.** Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Extinguish with carbon dioxide, dry chemical, foam. In the event of fire, cool tanks with water spray.



Unsuitable Extinguishing Media:

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from Chemicals:

Vapors may form explosive mixture with air. Flash back possible over considerable distance.

Special protective equipment for fire-fighters:

Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Evacuate personnel to safe areas. Do not breathe vapors or spray mist.

Wear a positive pressure supplied air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

Environmental precautions:

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and work pits. If substance has entered a water course or sewer or contaminated soil or vegetation, advise police.

Methods and Material for Containment and Clean Up:

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere.

7. HANDLING AND STORAGE

Precautions for Safe Handling & Product Transfer:

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

Conditions for Safe Storage & Unsuitable Materials:

Keep tightly closed at room temperature in a dry, cool and well ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible material. Store in original container. Electrical equipment should be protected to the appropriate standard.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: OEL 1000 ppm (1920 mg/m³)

Appropriate Engineering Controls: The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Individual Protection Measures

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated. Filter A (acc. To DIN 3181) for vapors of organic compounds.

Hand protection: Handle with gloves. In case full contact wear gloves from butyl rubber material, in splash contact wear gloves from butyl rubber material. The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

Eye protection: Tightly sealed goggles.

Skin and body Protection: Chemical resistant apron/flame retardant antistatic protective clothing, heavy duty work shoes.

Hygiene measure: Ventilation hoods and fans required when working with organic solvents or in hot melt applications. Keep working clothes separately. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor: liquid, colourless, characteristic	Evaporation rate: 2.4 (nBuAc=100)
Melting Point: -114°C	Specific gravity: 0.789 g/cm ³ at 20 °C
pH: 7.0 at 20 °C	Solubility in water: Soluble
Boiling point: 78-80 °C	Viscosity: 1.2 mPa.s
Vapour pressure: 59 kPa at 20 °C	Vapour density: N/A
Lower explosion limits: 3.3% Vol	Upper explosive limit: 19 %Vol
Auto-ignition temperature: 365 °C	Flash point: 12.8 °C
Odour threshold: N/A	Flammability (solid, gas): N/A
Decomposition temperature: N/A	Solubility in other solvents: N/A
n-octanol/water partition coefficient (log P_{ow}): -0.32	



10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions.

Reactions: Heat-sensitive/ decomposition; unsuitable working materials: various plastic, rubber. Explosible with air in avaporous/gaseous state.

Possibility of Hazardous Reactions: no data available

Conditions to avoid Moisture. Heat, Flames and sparks.

Materials to be avoided: Alkali metals, alkaline earth metals, alkali oxides, strong oxidizing agents, halogen-halogen compound, chromyl chloride, ethylene oxide, fluorine, perchlorates, potassium permanganate, sulfuric acid, perchloric acid, permanganic acid, oxides of phosphorus, nitric acid, nitrogen dioxide, uranium hexafluoride, hydrogen peroxide, chromium(VI) oxide

Hazardous Decomposition Products: Carbon monoxides, Carbon dioxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD50 Inhalation - rat → 95.6 mg/l - 4h

LD50 Oral - rat – 5045 mg/kg

Sensitization: Slight irritant to skin and eyes. After inhalation of vapors; slight mucosal irritations. After swallowing of large amounts; nausea and vomiting. After absorption of large quantities; dizziness, inebriation, narcosis, respiratory paralysis. After long-term exposure to the chemical: dermatitis.

Chonic toxicity: An embryotoxic effect need not be feared when the threshold limit value is observed.

Further toxicological information: The product should be handled with the care usual when dealing with chemicals

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: LC₅₀ – L.idus – 8140 mg/l – 48 h

Biodegradability remark: Biodegradation 94%.

Bioaccumulative potential: Distribution; log P(oct): -0.32 (experimental). No Bioaccumulation is to be expected (log P o/w <1).

Mobility: No data available



Affected in any other way: No ecological problems are to be expected when the product is handled and used with due care and attention.

13. DISPOSAL CONSIDERATIONS

Material Disposal: There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Container Disposal: Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. TRANSPORT INFORMATION

ADR/RID

UN-No: 1170 Class: 3 Packing group: II

Proper shipping name: ETHANOL

AND/ADNR

UN-No: 1170 Class: 3 Packing group: II

Ems: F-E, S-D

Proper shipping name: ETHANOL

IATA

UN-No: 1170 Class: 3 Packing group: II

Proper shipping name: ETHANOL

15. REGULATORY INFORMATION

GHS – Labelling:

Hazard statement(s)



H225 Highly flammable liquid and vapor.

Precautionary statement(s)

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

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

P370 + P378 In case of fire: Use dioxide, dry chemic or foam for extinction.

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

Hazard symbol(s)

F Highly flammable liquid

R - phrase(s)

R11 - Highly flammable.

S - phrase(s)

S7 Keep container tightly closed.

S16 Keep away from sources of ignition. - No smoking.

16. OTHER INFORMATION

Modern Chemical Co.,Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensive or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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