



SAFETY DATA SHEET

DENATURED ETHANOL 95

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

Product name: DENATURED ETHANOL 95

Recommended use: Chemical for industrial

Manufacturer/Supplier: **MODERN CHEMICAL CO.,LTD.**
82/80 Soi Ekamai 22 (Nuannoi), Sukhumvit 63,
Klong Tan Nuea, Watthana, Bangkok 10110

Telephone No: 0-2715-0897-9, 0-2392-3410-3

Fax No: 0-2715-0908-9, 0-2391-1571-2

Emergency Telephone No: 0-2715-0897-9, 0-2392-3410-3

2. HAZARDS IDENTIFICATION

Label elements

Pictogram



Signal word

Danger

Hazard statement(s):

- 1.) Highly flammable liquid and vapour.
- 2.) Causes serious eye irritation.

Precautionary statement(s):

- 1.) Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
- 2.) Ground/bond container and receiving equipment.
- 3.) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- 4.) Store in a well-ventilated place. Keep container tightly closed.



3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: Ethyl alcohol Denatured 95, Denatured alcohol 95, Ethanol Denatured 95, DEB95

Ingredients	% (w/w)	CAS NO.
DENATURED ETHANOL 95	100	64-17-5

4. FIRST AID MEASURES

- Inhalation:** Fresh air.
- Skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Eye contact:** Rinse out with plenty of water. Call in ophthalmologist.
- Ingestion:** Immediately make victim drink water (two glasses at most). Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Carbon dioxide, Foam, Dry powder, Water.

Unsuitable Extinguishing Media:

For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards arising from Chemicals:

Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air at ambient temperatures. Pay attention to flashback. Development of hazardous combustion gases or vapours possible in the event of fire.

Special protective equipment for fire-fighters :

In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.

Environmental precautions: Do not let product enter drains. Risk of explosion.



Methods and Material for Containment and Clean Up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

7. HANDING AND STORAGE

Precautions for Safe Handling & Product Transfer:

Observe label precautions. Advice on protection against fire and explosion. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Conditions for Safe Storage & Unsuitable Materials:

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Recommended storage temperature see product label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: OEL 1000 ppm

Appropriate Engineering Controls: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7.1

Individual Protection Measures

Respiratory protection: Required when vapours/aerosols are generated. Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds. The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Hand protection: Full contact: Glove material: butyl-rubber, Splash contact: Glove material: Nitrile rubber. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Eye protection: Safety glasses

Skin and body Protection: Flame retardant antistatic protective clothing.

Hygiene measure: No data available.



9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor: liquid, colourless, alcohol-like	Evaporation rate: N/A
Melting Point: -117°C	Specific gravity: 0.805-0.812 g/cm ³ at 20 °C
pH: 7.0 at 10 g/l 20 °C	Solubility in water: Soluble at 20 °C
Boiling point : 78 °C	Viscosity: 1.2 mPa.s at 20 °C
Vapour pressure: 59 hPa at 20 °C	Vapour density: N/A
Lower explosion limits: 3.5 %Vol	Upper explosive limit: 15 %Vol
Auto-ignition temperature: 425 °C	Flash point: 17 °C
Odour threshold: 0.1 – 5058.5 ppm	Flammability (solid, gas): Not applicable
Decomposition temperature: N/A	Solubility in other solvents: N/A
n-octanol/water partition coefficient (log P_{ow}): -0.31	

10. STABILITY AND REACTIVITY

Chemical Stability:

The product is chemically stable under standard ambient condition (room temperature).

Reactions:

Vapours may form explosive mixture with air.

Possibility of Hazardous Reactions:

Risk of explosion/exothermic reaction with: hydrogen peroxide, perchlorates, perchloric acid, nitric acid, mercury (II) nitrate, permanganic acid, Nitriles, peroxide compounds, Strong oxidizing agents, nitrosyl compounds, Peroxides, sodium, Potassium, halogen oxides, calcium hypochlorite, nitrogen dioxide, metallic oxides, uranium hexafluoride, iodides, chlorine, alkali metals, alkaline earth metals, alkali oxides, ethylene oxide, silver, with, nitric acid, silver compounds, with, ammonia, potassium permanganate, with, conc. Sulfuric acid. Risk of ignition or formation of inflammable gases or vapours with: halogen- halogen compounds, chromium (VI) oxide, chromyl chloride, fluorine, hydrides, oxides of phosphorus, platinum, nitric acid, with, potassium permanganate.

Conditions to avoid:

Warming at a lower temperature flash point than 15 Kelvin. It is a crisis.



Materials to be avoided: rubber, various plastics.

Hazardous Decomposition Products: No data available.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD50 (Oral, rat): 10,470 mg/kg

LD50 (Inhalation, rat): 124.7 mg/l -4h

Sensitization: After swallowing contact (rat): nausea and vomiting. After inhalation of vapors(rat) : Possible damages, mucosal irritations absorption. After skin contact (rabbit): repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. After eye contact (rabbit): causes serious eye irritation.

Chonic toxicity: Germ cell mutagenicity. Genotoxicity in vitro. Ames test. Salmonella typhimurium. Result: negative. Method: OECD Test Guideline 471.

Further toxicological information: Systemic effects: euphoria, After absorption of large quantities: Dizziness, inebriation, narcosis, respiratory paralysis. Handle in accordance with good industrial hygiene and safety practice.

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: LC50 - Leuciscus idus (Golden orfe): 8140 mg/l -48 h

Toxicity to daphnia and other aquatic invertebrates:

EC5 - E. sulcatum: 65 mg/l -72 h

EC50 - Daphnia magna (Water flea): 9268 - 14221 mg/l -48 h

Toxicity to algae: IC5 - Scenedesmus quadricauda (Green algae): 5000 mg/l -7d

Toxicity to bacteria: EC50 - Pseudomonas putida: 6500 mg/l - 16 h

Biodegradability remark: Biodegradation 94%.

Bioaccumulative potential: Partition coefficient: n-octanol/water log Pow: -0.31 (experimental), (Lit.)

Bioaccumulation is not expected.

Mobility: No data available.



Affected in any other way: No interference with wastewater treatment plants are to be expected when used properly. Discharge into the environment must be avoided.

13. DISPOSAL CONSIDERATIONS

Material Disposal: Disposal must be made according to waste regulations of 2008/98/EC. Other applicable national or local regulations. Dispose of chemicals in original container, do not mix other waste.

Container Disposal: Proceed with the unclean container, in the same way as the product itself. See www.retrologistik.com For processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. TRANSPORT INFORMATION

ADR/RID

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

Proper shipping name: ETHANOL

IMDG

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

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

EU regulation

Major Accident Hazard

SEVESO III

Legislation

FLAMMABLELIQUIDS

P5c

Quantity 1: 5.000 t

Quantity 2: 50.000 t



Occupational restriction Take note of Dir 94/33/EC on the protection of people at work.

National legislation

Storage class 3

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

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.

MODERN CHEMICAL CO., LTD. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MODERN CHEMICAL CO.,LTD. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.