



LABORATORY CHEMICALS AND CONSUMABLES

MATERIAL SAFETY DATA SHEET

ETHANOL 96%

1. Chemical Product and Company information.

Product name: Extra Neutral Potable Ethanol

Contact Information:

Radchem cc
PO Box 166982
Brackendowns
Alberton 1454
Telephone : **011 867 3726 / 2864**

2. Hazard Identification

Harmful if swallowed or inhaled. Possible aspiration hazard if swallowed (can enter lungs and cause damage). May be irritating to the skin, eyes and respiratory tract. Over exposure may cause CNS depression. Possible reproductive hazard.

3. Composition / information on ingredients

CAS #: 64-17-5

Synonym: Potable Ethyl Alcohol

Chemical Name: Ethyl Alcohol

Chemical Formula: C₂H₅OH

4. First Aid Measures

Eye Contact: Flush immediately with water or neutral saline solution for at least 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing and rinse contaminated area with soap and water. If skin irritation persists seek medical attention.

Serious Skin Contact: Not available

Inhalation: Remove the victim to fresh air. If not breathing, ensure open airway and institute cardiopulmonary resuscitation (CPR). If breathing is weak, irregular or has stopped apply artificial respiration. Oxygen may be beneficial. Keep affected person warm and at rest. Get immediate medical attention.



Serious Inhalation: Not available

Ingestion: If victim is conscious, give 1-3 glasses of water or milk to dilute stomach contents. If spontaneous vomiting occurs, or when vomiting is induced, monitor for breathing difficulty. Do not make an unconscious or semi-conscious person vomit. Keep affected person warm and at rest. Get medical attention for substantial ingestions and/or gastrointestinal symptoms.

Serious Ingestion: Not available.

5. Fire-fighting measures

Flammability of the Product: Flammable

Fire Hazards in Presence of Various Substances: Ethanol is a flammable liquid whose vapours can form ignitable and explosive mixtures with air at normal room temperatures. Thus, an aqueous mixture containing 30% ethanol can produce a flammable mixture of vapour and air at 29°C, and even one containing only 5% alcohol can produce a flammable mixture at 62°C (1).

Explosion Hazards in Presence of Various Substances: Ethanol reacts vigorously with a wide range of oxidising materials and other chemicals (2). e.g. disulphuryl difluoride, silver nitrate, bromine pentafluoride, potassium perchlorate, nitrosyl perchlorate, chromyl chloride, chloryl perchloride, uranyl perchlorite, chromium trioxide, fluorine nitrate, dioxygen difluoride, uranium hexafluoride, iodine heptafluoride, tetrachlorosilane, permanganic acid, nitric acid [the nitric acid fizz reaction used formerly for cleaning laboratory glassware should not be used (3,5)], hydrogen peroxide, peroxodisulphuric acid, potassium dioxide, sodium peroxide, potassium permanganate, ruthenium (VIII) oxide, platinum, potassium (6), potassium *tert*-butoxide, silver oxide, and sodium (7).

Fire Fighting Media and Instructions: Use dry chemical, alcohol foam or carbon dioxide to extinguish fire. Water may be ineffective but should be used to cool fire-exposed containers, structures and to protect personnel. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapour and to protect personnel attempting to stop a leak. Use water to dilute spills and to flush them away from sources of ignition. Do not flush down public sewers or other drainage systems.

Special Remarks on Fire Hazards: Dangerous when exposed to heat or flame. Vapours form flammable or explosive mixtures with air at room temperature. Vapour or gas may spread to distant ignition sources and flash back. Run-off to sewer may cause fire or explosion hazard. Containers may explode in heat of fire. Vapours may concentrate in confined areas. Irritating or toxic substances may be emitted upon thermal decomposition.

Special Remarks on Explosion Hazards: Not Available

6. Accidental release measures

Small Spill: Take immediate steps to stop and contain the spill. Caution should be exercised regarding personnel safety and exposure to the spilled material. Eliminate all sources of ignition and wear protective clothing. Absorb small spills onto paper and remove to a safe area for burning or burying. Flush the contaminated area with plenty of water.

Large Spill: Stop leak if you can do it without risk. Contact your local fire department. Eliminate all sources of ignition and static; restrict access to area until completion of clean-up procedure. Wear adequate protective equipment, use self-contained breathing apparatus in confined poorly-ventilated areas. Large quantities should be absorbed on to sand or vermiculite and removed to a safe area for burning or burying. Flush the contaminated area with plenty of water. Incineration is the recommended method of disposal.

7. Handling and storage

Precautions: Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion.

Storage: Store in approved flammable liquid storage containers. Keep containers tightly closed as this material



readily absorbs moisture. Store away from incompatible materials. Store in a cool, dry well-ventilated area away from sparks, flames and other sources of ignition. Eliminate of all sources of static electricity. Use non-sparking electrical and ventilation systems.

8. Exposure controls/personal protection

Engineering Controls: Engineering control methods to reduce hazardous exposures are preferred. General methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions and process modification (e.g. substitution of a less hazardous material). Administrative controls and personal protective equipment may also be required. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside. Supply sufficient replacement air to make up for air removed by exhaust systems.

Personal Protection: If exposure limits are exceeded or if irritation is experienced, an approved Respirator for organic vapours is generally acceptable. For high concentrations and for oxygen-deficient atmospheres, use an approved air-supplied respirator. Full respiratory protection should be readily available in case of spillage. Rubber or neoprene gloves are recommended. Prevent eye contact with this material. Wear chemical tight goggles. Provide an eyewash station immediately accessible to the work area. Avoid skin contact. When working with this substance, wear appropriate chemical protective gloves. Depending upon conditions of use, additional protection may be necessary such as face shield, apron, etc.

Personal Protection in Case of a Large Spill:

9. Physical and chemical properties

Physical state and appearance: Colourless, volatile liquid

Odour: Characteristic pleasant odour

Taste: Not available

Colour: Colourless

Boiling Point: 78,2°C

Melting Point: -112°C

Critical Temperature: 363°C

Specific Gravity: Not available

Vapour Density: 801,6 kg/m³ at 25°C

Volatility: Not available

Odour Threshold: Not available

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Miscible with water in all proportions. Miscible with ether, methanol, chloroform and acetone

10. Stability and reactivity

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Overheating, flames, sources of ignition or static electricity. Oxidising agents. Vapour/air mixtures are explosive.

Incompatibility with various substances: Not available

Corrosivity: Not available



Special Remarks on Reactivity: Not available

Special Remarks on Corrosivity: Not available

Polymerization: Will not occur.

11. Toxicological information

Routes of Entry: Ingestion

Toxicity to Animals: Not available

Chronic Effects on Humans: Not available

Other Toxic Effects on Humans: Not available

Special Remarks on Toxicity to Animals: Not available

Special Remarks on Chronic Effects on Humans: Not available

Special Remarks on other Toxic Effects on Humans: Not available

12. Ecological information

Ecotoxicity: Not available

BOD5 and COD: Not available

Products of Biodegradation: Not available

Toxicity of the Products of Biodegradation: Not available.

Special Remarks on the Products of Biodegradation: Not available.

13. Disposal considerations

Waste Disposal: Only under conditions approved by local authorization. Empty containers may contain flammable and hazardous residues. Always obey hazard warnings.

14. Transport information

DOT Classification: Flammable liquid

Identification: : Ethanol solutions

Special Provisions for Transport: Not available

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