



MATERIAL SAFETY DATA SHEET

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Issue Date:

1- Chemical Product Information and Company Identification.

Product Name: : Acetaldehyde diethyl acetal GC reference standard, AnStan[®].
Synonym: : 1,1-Diethoxyethane.
Product code: : BS10803.
CAS Number: : 105-57-7.
Company Name: : Briti Scientific.
Company Address: : Plot No:78/B/13, SY-79,Phase-VI, Jeedimetla,Hyderabad-500 055.
Telangana, India.

Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
105-57-7.	1,1-Diethoxyethane.	C ₆ H ₁₄ O ₂ .

Section 3- Hazards Identification.

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Flammable liquids: Category 2

Skin Corrosion/Irritation: Category 2

Serious Eye Damage/Eye Irritation: Category 2

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling.



Wear protective gloves/protective clothing/eye protection/face protection.

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Skin

If skin irritation occurs: Get medical advice/attention.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention.

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

None identified

Section 4- First Aid Measures.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion: Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects: Difficulty in breathing. Inhalation of high vapor Concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Notes to Physician: Treat symptomatically.

Section 5- Fire Fighting Measures.

Suitable Extinguishing Media: Carbon dioxide (CO₂), Dry chemical, Water mist may be used to cool closed containers, Chemical foam, Water mist may be used to cool closed containers.

Unsuitable Extinguishing Media: No information available.

Flash Point: -21 °C / -5.8 °F.



Method - No information available.

Autoignition Temperature: 230 °C / 446 °F.

Explosion Limits

Upper 10.40%

Lower 1.65%

Sensitivity to Mechanical Impact: No information available.

Sensitivity to Static Discharge: No information available.

Specific Hazards Arising from the Chemical

Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products: Carbon monoxide (CO), Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
2	3	0	N/A

Section 6- Accidental Release Measures.

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

Environmental Precautions: Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Section 7- Handling and Storage.

Handling: Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage: Keep in a dry place. Keep container tightly closed. Keep away from heat, sparks and flame. Protect from direct sunlight. Refrigerator/flammables. May form explosive peroxides on prolonged storage. Keep under nitrogen. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Acids. Strong oxidizing agents. Strong bases. Strong reducing agents.



Section 8- Exposure Control/Personal Protection.

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures: Ensure adequate ventilation, especially in confined areas. Ensure that eye wash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment.

Personal Protective Equipment

Eye/face Protection: 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 and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection: No protective equipment is needed under normal use conditions.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice.

Section 9- Physical and Chemical Properties.

Appearance:	Colourless oily liquid.
Odor:	No information available.
Odor Threshold:	No information available.
pH:	No information available.
Melting Point/Range:	-100 °C.
Boiling Point/Range:	103 °C.
Flash Point:	-21 °C / -5.8 °F
Evaporation Rate:	No information available.
Flammability (solid,gas):	Not applicable.
Flammability or explosive limits:	
Upper	No information available.
Lower	No information available.
Vapor Pressure:	No information available.
Density:	0.831 g/ml.
Solubility:	Soluble in chloroform.
Partition coefficient; n-octanol/water:	No data available.
Autoignition Temperature:	230 °C / 446 °F.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Molecular formula:	C ₆ H ₁₄ O ₂ .
Molecular Weight:	118.17 g/mol.



Section 10- Stability and Reactivity.

Reactive Hazard: None known, based on information available

Stability: May form explosive peroxides. Stable under normal conditions. Heat sensitive, Moisture sensitive, Light sensitive, Reacts with air to form peroxides.

Conditions to Avoid: Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials: Acids, Strong oxidizing agents, Strong bases, Strong reducing agents.

Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂).

Hazardous Polymerization: Hazardous polymerization does not occur.

Hazardous Reactions: None under normal processing.

Section 11- Toxicological Information.

Acute Toxicity

Product Information: No acute toxicity information is available for this product.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetal	LD50 = 4600 mg/kg (Rat)	LD50 = 10 g/kg (Rabbit)	Not listed

Toxicologically Synergistic Products: No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: No information available.

Sensitization: No information available.

Mutagenic Effects: No information available.

Reproductive Effects: No information available.

Developmental Effects: No information available.

Teratogenicity: No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard: No information available.

Symptoms / effects, both acute and delayed: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Endocrine Disruptor Information: No information available.

Other Adverse Effects: The toxicological properties have not been fully investigated.

Section 12- Ecological Information.

Ecotoxicity: No information available.

Persistence and Degradability: Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation: No information available.

Mobility: Will likely be mobile in the environment due to its water solubility.



Section 13- Disposal Considerations.

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Section 14- Transport Information.

DOT

UN-No: UN1088

Hazard Class: 3

Packing Group: II

TDG

UN-No: UN1088

Hazard Class: 3

Packing Group: II

IATA

UN-No: UN1088

Proper Shipping Name: ACETAL

Hazard Class: 3

Packing Group: II

IMDG/IMO

UN-No: UN1088

Proper Shipping Name: ACETAL

Hazard Class: 3

Packing Group: II

Section 15- Regulatory Information.

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710).

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export: Not applicable.

U.S. Federal Regulations

SARA 313: Not applicable

SARA 311/312 Hazard Categories See section 2 for more information.

CWA (Clean Water Act): Not applicable.

Clean Air Act: Not applicable.

OSHA - Occupational Safety and

Health Administration: Not applicable.





CERCLA: Not applicable.

California Proposition 65: This product does not contain any Proposition 65 chemicals.

Section 16- Other Information.

Briti Scientific provides the information contained herein in good faith but makes no representation as to its comprehensiveness 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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