



MATERIAL SAFETY DATA SHEET

2-Ethyl-1,3-hexanediol

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 2-Ethyl-1,3-hexanediol

SYNONYM: Octylene Glycol

MOLECULAR FORMULA: C₈H₁₈O₂

MOLECULAR WEIGHT: 146.23g/mol

CREATION DATE: Mar 02 2007

CONTACT PERSON:

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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: Oily, colorless liquid.

Warning! Causes eye irritation. May be harmful if swallowed or absorbed through the skin. This substance has caused adverse reproductive and fetal effects in animals. Hygroscopic (absorbs moisture from the air).

Target Organs: Eyes.

Potential Health Effects

Eye: Causes severe eye irritation.

Skin: May cause mild skin irritation. May be harmful if absorbed through the skin. Substance is readily absorbed through the skin. Not expected to cause an allergic skin reaction.

Ingestion: May be harmful if swallowed. Ingestion of large amounts may cause CNS depression.

Inhalation: Causes irritation of mucous membrane.

Chronic: May cause fetal effects based on animal studies. Eastman Kodak study on the developmental toxicity of 2-ethyl-1,3-hexanediol in rats by gavages at doses of 0, 500, 1000, 2000, and 4000 mg/kg produced maternal toxicity and lethality at oral doses of 2000 and 4000 mg/kg. Significant fetal toxicity and Teratogenicity were evident at a maternally toxic dose (2000 mg/kg), while only one fetus in the 500 mg/kg and two fetuses in the 1000 mg/kg group had tail malformations.

3. COMPOSITION, INFORMATION ON INGREDIENTS

CAS No.	EC No.	Chemical Name	Percent
94-96-2	202-377-9	2-Ethyl-1,3-hexanediol	>98

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.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: Water spray may cause frothing. In case of fire, use carbon dioxide, dry chemical powder or appropriate foam.

Auto ignition Temperature: 335 deg C (635.00 deg F)

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

6. ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

7. HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Avoid breathing vapor or mist.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
2-Ethyl-1,3-hexanediol	none listed	none listed	none listed

OSHA Vacated PELs: 2-Ethyl-1,3-hexanediol: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

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 respirator use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	oily, colorless
Odor:	Odorless
pH:	Not available
Vapor Pressure:	Not available
Vapor Density:	5.03 (air=1)
Evaporation Rate:	Not available.

Viscosity:	323 cps @ 20 deg C
Boiling Point:	244 deg C @ 760 mm Hg
Flash Point:	120 °C
Freezing/Melting Point:	-40 deg C
Decomposition Temperature:	Not available.
Solubility:	Slightly soluble.
Specific Gravity/Density:	0.933 g/cm ³ at 25 °C

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Moisture, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, strong acids, acid chlorides, acid anhydrides.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

11. TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 94-96-2: M02625000

LD50/LC50:

CAS# 94-96-2:

Dermal, guinea pig: LD50 = >10 mL/kg;

Draize test, rabbit, eye: 20 mg Severe;

Draize test, rabbit, skins: 500 mg Mild;

Oral, mouse: LD50 = 1900 mg/kg;

Oral, rabbit: LD50 = 2600 mg/kg;

Oral, rat: LD50 = 1400 mg/kg;
Skin, rabbit: LD50 = 2 gm/kg;

.C arcinogenicity:

CAS# 94-96-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: Noncosmetic products containing ethohexadiol were voluntarily removed from the US & Canadian markets in 1991.

This removal was in response to an unpublished study by a manufacturer showing poor lung expansion in the offspring of exposed animals.

Reproductive Effects: No data available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies:

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

14. TRANSPORT INFORMATION

Shipping Name: 2-Ethyl-1,3-hexanediol

Hazard Class: Not dangerous goods

UN Number: Not dangerous goods

Packing Group:: Not dangerous goods

15. REGULATORY INFORMATION

TSCA

CAS# 94-96-2 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 94-96-2: immediate, delayed.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 94-96-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives**

Hazard Symbols:

Risk Phrases:

Safety Phrases:

S 25 Avoid contact with eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 39 Wear eye/face protection.

S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 94-96-2: 1

Canada - DSL/NDSL

CAS# 94-96-2 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations and the MSDS contains all of the information required by those regulations.

16. OTHER INFORMATION

The information in this safety data sheet is based on data and samples provided. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes.

The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. Godavari Biorefineries Limited does not guarantee the accuracy or exhaustiveness of the information provided.