

SAFETY DATA SHEET

Ethylene glycol diethyl ether (EGDE)

SECTION 1: IDENTIFICATION

Product identifier: Ethylene glycol diethyl ether

Other identifier: EGDE

CAS number: 629-14-1

Recommended use: Laboratory chemical, intermediate, solvent

Restrictions on use: Only for uses supported by the supplier's product specification and applicable regulatory status.

Supplier: Automat Solutions, Inc.

U.S. address: 2100 Williams St, San Leandro, CA 94577, United States.

U.S. telephone: +1 (510) 982-6488.

Email: contact@automatsoln.com.

Emergency telephone: +1 (510) 982-6488.

SECTION 2: HAZARD IDENTIFICATION

GHS classification: Flammable liquids, Category 2.

GHS classification: Eye irritation, Category 2A.

GHS classification: Reproductive toxicity, Category 1A (development); Category 2 (fertility).

Signal word: Danger.

Hazard symbols (named): GHS02 — Flame; GHS07 — Exclamation mark; GHS08 — Health hazard.

H225: Highly flammable liquid and vapor.

H319: Causes serious eye irritation.

H360Df: May damage the unborn child. Suspected of damaging fertility.

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.

P240: Ground and bond container and receiving equipment.

P241: Use explosion-proof electrical, ventilating and lighting equipment.

P242: Use non-sparking tools.

P243: Take action to prevent static discharges.

P264: Wash hands and exposed skin thoroughly after handling.

P280: Wear protective gloves, protective clothing, eye protection and face protection.

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

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice or attention.

P308+P313: IF exposed or concerned: Get medical advice or attention.

P370+P378: In case of fire: Use dry chemical, carbon dioxide or alcohol-resistant foam to extinguish.

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

P405: Store locked up.

P501: Dispose of contents and container through an approved waste disposal facility in accordance with applicable local, state and federal regulations.

Other hazards / hazards not otherwise classified: May form explosive peroxides.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Type: Substance.

Chemical name: Ethylene glycol diethyl ether

Synonym / abbreviation: EGDE

CAS number: 629-14-1

Molecular formula: C₆H₁₄O₂

Molecular weight: 118.17 g/mol

Composition declaration: ≥90%; upper limit 100%.

Hazardous impurities / stabilizers: No additional information available.

SECTION 4: FIRST AID MEASURES

Inhalation: Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if symptoms occur or persist.

Skin contact: Immediately remove contaminated clothing. Rinse affected skin thoroughly with water or shower. Wash with soap and water. Obtain medical attention if irritation or rash occurs. Wash contaminated clothing before reuse.

Eye contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Obtain medical attention if irritation persists.

Ingestion: Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor if you feel unwell; obtain advice after ingestion.

Most important acute and delayed effects: Causes serious eye irritation. May damage the unborn child. Suspected of damaging fertility.

Medical attention / treatment: Treat symptomatically. Protect rescuers from exposure.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable / unsuitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide, as appropriate to the surrounding fire. Do not direct a solid water jet at spilled liquid.

Specific hazards: Vapors can form ignitable mixtures, travel along floors and flash back. Heated closed containers may rupture.

Hazardous combustion products: Carbon monoxide and carbon dioxide.

Firefighter protection: Wear self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance.

Additional precautions: Prevent contaminated firefighting runoff from entering drains and waterways.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Isolate the area. Keep unprotected personnel away. Ensure ventilation; avoid breathing dust, mist or vapor and avoid skin/eye contact. Wear the protection described in Section 8.

Emergency procedures: Evacuate the affected area when exposure cannot be controlled; trained responders only for significant releases.

Environmental precautions: Prevent entry into drains, sewers and waterways. Contain released material.

Ignition control: Remove ignition sources if safe. Use non-sparking tools and suitable explosion-proof equipment.

Containment / cleanup: Absorb with non-combustible inert material such as sand or vermiculite. Collect into a compatible, closed, labeled waste container.

Waste handling: Dispose of collected material and contaminated packaging according to Section 13.

SECTION 7: HANDLING AND STORAGE

Handling: Use suitable local exhaust ventilation. Avoid contact and inhalation. Wash after handling. Do not eat, drink or smoke in work areas.

Storage: Keep containers tightly closed in a dry, well-ventilated location away from incompatible substances. Protect from moisture.

Flammable / combustible handling: Keep away from heat and ignition sources; ground and bond containers during transfer and control static discharge. Use non-sparking tools and explosion-proof equipment as applicable.

Security: Store locked up.

Atmosphere / sensitivity: Store under dry inert gas where compatible with the supplier's packaging and instructions; material is moisture-sensitive or hygroscopic as described in this SDS.

Peroxide control: Date receipt/opening; maintain an approved peroxide-testing program. Do not distill to dryness. Do not open or move containers showing crystals or suspected peroxide deposits; obtain specialist assistance.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No substance-specific occupational exposure limit available in the source information. Apply exposure limits and workplace controls required by the applicable jurisdiction.

Engineering controls: Use local exhaust or a suitable fume hood. Provide an eyewash and safety shower near the work area.

Eye / face protection: Chemical safety goggles; use a face shield in addition to goggles when splashing or corrosive exposure is possible.

Hand protection: Wear chemical-resistant gloves selected for the chemical, exposure duration, temperature and task. Confirm permeation/breakthrough performance with the glove manufacturer; select gloves with a breakthrough time appropriate for the task.

Skin / body protection: Wear protective clothing suitable for the task. Use flame-resistant, antistatic clothing where a flammable atmosphere is possible.

Respiratory protection: Use a properly selected, fit-tested, NIOSH-approved respirator under a respiratory-protection program when engineering controls are insufficient. Cartridge/filter selection must address all relevant gases, vapors and particles. Unknown or immediately dangerous concentrations require appropriate supplied-air protection or SCBA.

Hygiene: Remove contaminated clothing and wash before reuse. Wash hands and exposed skin after handling.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Data basis: Reference values from available supplier and literature information. These values are not batch specifications; estimates and test conditions are identified where available.

Molecular formula: C₆H₁₄O₂

Molecular weight: 118.17 g/mol

Appearance / physical state: Clear, colorless liquid

Odor: Faint ether-like

Odor threshold: No data available.

Melting / freezing point: -74 °C

Initial boiling point / boiling range: 121 °C at 1,013 hPa

Flammability: Flammable liquids, Category 2

Lower / upper flammability limits: 1.2 / 11.9 vol%

Flash point: 19-22 °C, closed cup, supplier range

Autoignition temperature: 208 °C

Decomposition temperature: No data available.

pH: No data available.

Kinematic viscosity: No data available.

Dynamic viscosity: 0.7 mPa·s at 20 °C

Water solubility: Partly soluble; approximately 34 g/L at 20 °C. Published values vary.

Other solubility: No data available.

Partition coefficient (n-octanol/water): log Kow 0.66

Vapor pressure: 13 hPa at 20 °C

Density / relative density: 0.842 g/cm³ at 20 °C

Relative vapor density: 4.07 (air = 1)

Evaporation rate: No data available.

Particle characteristics: Not applicable to the liquid; no particle data for any solidified phase.

Refractive index: n_{20/D} 1.392

Oxidizing properties: No data available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: May form explosive peroxides on exposure to air.

Chemical stability: Stable under recommended dry storage conditions; protect from stated sensitivities.

Possibility of hazardous reactions: Ignitable vapor/air mixtures may form.

Conditions to avoid: Excess heat, incompatible materials and moisture where sensitive. Avoid sparks, flames and static discharge.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: Carbon monoxide and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Data basis: Available supplier toxicological information; missing study conditions are stated where applicable. No-data entries do not establish absence of hazard.

Likely routes of exposure: Inhalation, skin contact, eye contact and ingestion.

Acute toxicity / numerical measures: Oral LD₅₀ (rat): 4,390 mg/kg. Dermal LD₅₀ (rabbit): 8 mL/kg as reported by the source supplier; no mass-unit conversion made.

Skin corrosion / irritation: No data available.

Serious eye damage / irritation: Causes serious eye irritation.

Respiratory / skin sensitization: No sensitization data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: No data available. IARC, NTP and OSHA carcinogen-list information: No data available.

Reproductive toxicity: May damage the unborn child; suspected of damaging fertility (supplier classification).

STOT, single exposure: Not classified; no additional data available.

STOT, repeated exposure: No data available.

Aspiration hazard: No data available.

Symptoms / delayed effects: Causes serious eye irritation. May damage the unborn child. Suspected of damaging fertility.

Interactions: No additional information available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No quantitative ecotoxicity data available. Avoid environmental release.

Persistence / degradability: No data available.

Bioaccumulative potential: No bioaccumulation study data available; partition coefficient, if available, is listed in Section 9.

Mobility in soil: No data available.

Other adverse effects: No additional data available. Prevent release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment: Collect waste and contaminated absorbents in compatible, closed, labeled containers. Use a licensed waste contractor and comply with applicable local, state and federal requirements.

Environmental precautions: Do not discharge to drains, soil or waterways. Do not mix with incompatible wastes.

Contaminated packaging: Handle residues and uncleaned packaging with the same precautions as the product. Empty containers may retain ignitable vapor; do not cut, weld or heat them.

SECTION 14: TRANSPORT INFORMATION

DOT (U.S.): UN1153; Ethylene glycol diethyl ether; Class 3; Packing Group II.

IMDG: UN1153; ETHYLENE GLYCOL DIETHYL ETHER; Class 3; Packing Group II.

IATA: UN1153; Ethylene glycol diethyl ether; Class 3; Packing Group II.

Transport hazard labels: 3.

ERG guide: 127 (reported value).

Environmental hazards / IMDG marine pollutant: No, as reported by the source supplier.

Transport in bulk under IMO instruments: Not assessed; these entries address packaged product.

Special precautions: Keep containers closed, secure and protected from damage and incompatible materials. Apply handling/storage precautions in Sections 7 and 10.

Air shipment details: Apply the current packing instructions, quantity limits and carrier restrictions for the actual shipment.

TDG (Canada): UN1153; Ethylene glycol diethyl ether; Class 3; Packing Group II.

SECTION 15: REGULATORY INFORMATION

TSCA inventory information: No verified inventory-status data available.

SARA 311/312 hazard categories: Flammable liquids; Eye irritation; Reproductive toxicity.

SARA 313 / TRI: This substance falls within the certain glycol ethers category definition (U.S. EPA). Reporting obligations depend on facility activities and quantities.

Clean Air Act: This substance falls within the glycol ethers hazardous-air-pollutant category definition (U.S. EPA).

SECTION 16: OTHER INFORMATION

Preparation / revision date: 2026-10-19.

Document version: AS-EGDE-20261019-01.

Revision description: Updated reproductive hazards, peroxide precautions and partial water solubility; corrected UN1153 proper shipping name. Supplier address and telephone updated.

Information sources: Existing Automat Solutions SDS and the supplied chemical comparison, with supplemental supplier information. Merck 820390; Thermo Scientific AC20824/L14283 and ICSC 1569 as summarized in the source comparison.

Data limitations: Supplier and literature values are reference information and are not measurements on an Automat production lot. Missing test conditions and unavailable data are stated in the relevant sections.

Abbreviations: GHS, Globally Harmonized System; LD50, median lethal dose; LC50, median lethal concentration; ATE, acute toxicity estimate; STOT, specific target organ toxicity; DOT, U.S. Department of Transportation; IMDG, International Maritime Dangerous Goods; IATA, International Air Transport Association.

Disclaimer: This information describes safety precautions for the identified material. It is not a certificate of analysis or a guarantee of product properties. The information may not apply when the material is combined with other substances or used in processes not described here.