

MATERIAL SAFETY DATA SHEET

Date Prepared: 12/18/2000 Current Date: 02/04/03
Last Revised: 9/01/02

SECTION 4—FIRST AID MEASURES (Continued)

Inhalation: Remove to fresh air. Seek medical attention if cough or other symptoms develop.

SECTION 5—FIRE FIGHTING MEASURES

General Information: Firefighters should wear fire-fighting protective equipment and a NIOSH-approved full-face self-contained breathing apparatus.

Extinguishing Media: Dry chemical, carbon dioxide, alcohol-resistant foam and water spray.

Flash Point (Propylene Glycol): 210° F (99° C) **Auto-Ignition Temp (Propylene Glycol):** 700° F (371° C)

NFPA Codes: Health: 1 Flammability: 1 Reactivity: 0

Lower Explosive Limit (Propylene Glycol): 2.6% **Upper Explosive Limit (Propylene Glycol):** 12.5%

SECTION 6—ACCIDENTAL RELEASE MEASURES

Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth) and place in sealed containers.

SECTION 7—HANDLING and STORAGE

Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with skin and eyes. Keep container tightly closed.

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

SECTION 8—EXPOSURE CONTROLS, PERSONAL PROTECTION

Ventilation: Provide sufficient general and local exhaust ventilation.

Respiratory Protection: Use an appropriate NIOSH-approved respirator if airborne concentrations exceed assigned PEL(s) or TLV(s). All applicable requirements in 29 CFR §1910.134 should be met.

Protective Clothing: Wear chemical-resistant gloves. Avoid repeated and prolonged skin contact.

Eye Protection: Chemical splash goggles are recommended if the potential for a splash exists; ANSI-approved safety glasses equipped with side shields should be required at a minimum.

SECTION 9—PHYSICAL AND CHEMICAL PROPERTIES

(For pure Propylene Glycol)

Physical State:	Liquid	Boiling Point:	188° C
Appearance:	Clear, colorless	Freezing/Melting Point:	-60° C
Odor:	Odorless	Decomposition Temperature:	Not available
pH:	Not available	Solubility:	Miscible in water
Vapor Pressure:	0.07 mm Hg	Specific Gravity/Density:	1.0360

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SECTION 9—PHYSICAL AND CHEMICAL PROPERTIES (Continued)

Vapor Density: 2.62 Molecular Formula: C₃H₈O₂
Evaporation Rate: 0.01 (N-Butyl Acetate=1) Molecular Weight: 76.0548

SECTION 10—STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials
Incompatibility: Strong oxidizing agents
Materials to Avoid: None known
Hazardous Decomposition: Carbon monoxide and carbon dioxide
Hazardous Polymerization: Has not been reported

SECTION 11—TOXICOLOGICAL INFORMATION

NIOSH RTECS Number: Propylene Glycol: TY2000000

Carcinogenicity: None of the ingredients in this product are listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Neurotoxicity: No data available

Mutagenicity: No data available

SECTION 12—ECOLOGICAL INFORMATION

Ecotoxicity: Not available **Physical/Chemical:** Not available.
Environmental Fate: Not available. **Other:** Not available.

SECTION 13—DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state, and local regulations.

SECTION 14—TRANSPORT INFORMATION

US DOT: Not regulated.

IMO: No information available.

Canadian TDG: No information available

RID/ADR: No information available

IATA: No information available

SECTION 15—REGULATORY INFORMATION

Toxic Substances Control Act (TSCA): Propylene Glycol is listed on the TSCA Chemical Inventory.

SARA 313: This product does not contain chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.

Clean Air Act (CAA): This material does not contain hazardous air pollutants or Class 1 or Class 2 ozone-depleting substances.

Clean Water Act (CWA): None of the chemicals in this product are listed as Hazardous Substances, Priority Pollutants, or Toxic Pollutants under the CWA.

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SECTION 15—REGULATORY INFORMATION (Continued)

OSHA:	None of the chemicals in this product appear on the "List of Highly Hazardous Chemicals, Toxics and Reactives" found in Appendix A to 29 CFR §1910.119 (Process Safety Management of Highly Hazardous Chemicals).
Proposition 65	This product does not contain "Chemicals known to the State of California to cause cancer or reproductive toxicity."
Canada:	Propylene glycol is listed on Canada's DSL/NDSL List. This product has a WHMIS classification of "Not Controlled." Propylene glycol is not listed on Canada's Ingredient Disclosure List.

SECTION 16—ADDITIONAL INFORMATION

For additional product information contact:

Morgan Advanced Ceramics
2425 Whipple Road
Hayward, CA 94544
Tel: (510) 491-1100
Fax: (510) 491-1200

<http://www.morganadvancedceramics.com>

DISCLAIMER

Reasonable care has been taken in the preparation of the information contained in this Material Safety Data Sheet and the information provided is given in good faith. However, Morgan Advanced Ceramics assumes no responsibility as to the accuracy or suitability of such information and no warranty, expressed or implied, is made.