MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE AND PREPARATION

Supplier/Manufacturer:

American Polywater Corporation

11222 - 60th Street North

P.O. Box 53

Stillwater, MN 55082 USA Phone: 1-651-430-2270 Fax: 1-651-430-3634

Polywater Europe BV

Mauritsplaat 126 NL-3012CD Rotterdam Netherlands

Tel: +31 10 233 0578

Emergency Number: +1-651-430-2270

Product Name: AquaKleen™ Fiber Optic Cleaner (Type AQ)

Chemical Description: Water-based cleaning solution

Product Use: Cleaner for Fiber Optic Components

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS#	EC #	<u>Wt %</u>
1-Butoxy-2-propanol	5131-66-8	225-878-4	<10
Dipropylene glycol monomethyl ether	34590-94-8	252-104-2	<10
Isopropanol	67-63-0	200-661-7	<10

This product contains no other reportable hazardous components under 29 CFR 1910.1200. This product contains no other reportable hazardous components under European Directives 91/55/EEC.

3. HAZARDS IDENTIFICATION

Emergency Overview: Industrial use only. Keep out of reach of children.

Eye Contact: Direct eye contact with vapors may cause eye irritation. This irritation is

minimal and expected to be transient.

Skin Contact: Material designed to be gentle on skin.

Irritation and Sensitization

Potential:

This product has low skin irritation potential.

Inhalation (Breathing):No inhalation hazard expected with water vapor.

Ingestion (Swallowing): Material has low level of oral toxicity. Ingestion of large quantities may cause

irritation of the digestive tract and nervous system depression (e.g.,

drowsiness, dizziness, loss of coordination, and fatigue).

4. FIRST AID MEASURES

Eye Contact: Flush eyes with a large quantity for 15 minutes. If irritation continues, seek

medical attention.

Skin Contact: None Required. Material designed to be gentle on skin.

Inhalation (Breathing):No first aid expected to be required. Not an inhalation hazard.

Ingestion (Swallowing):Do not induce vomiting. Immediately administer large quantities of water.

Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash Point: 145 °F (63 °C) PMCC

Flammable Limits: Not Available

Autoignition Temperature: Not Available

Hazardous Decomposition and

By-Products: High temperature steam, potentially carbon monoxide, carbon dioxide.

Extinguishing Media: Not Applicable

Special Precautions: Not Applicable

Unusual Hazards: Sealed container can build up pressure when exposed to high heat.

6. ACCIDENTAL RELEASE MEASURES

Minimal spill hazard with small packages. Absorb with sand or absorbants.

7. HANDLING AND STORAGE

Keep containers tightly closed when not in use. Avoid unnecessary contact.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Normal ventilation is adequate.

Protective Gloves: For people with pre-existing skin conditions such as dermatitis the use of

impermeable gloves is recommended because this and other oil/grease

effective cleaners may adversely affect the skin.

Eye Protection: Eye protection is recommended, especially if the material is used in ways

where it could contact the eyes.

Other Protective Equipment: None known.

Exposure Limits and 1-Buto:

Recommendations:

1-Butoxy-2-propanol 50 ppm (Manufacturer Recommendation)

Dipropylene glycol

600 mg/m³ (OSHA PEL) 100 ppm (ACGIH TLV)

monomethyl ether

Isopropanol 400 ppm (OSHA PEL) 200 ppm (ACGIH TLV)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid

Odor Threshold: Not Available

Vapor Density (Air = 1): Not Available

Specific Gravity ($H_2O = 1$): .99

Solubility in Water: Complete

Boiling Point: ~212 °F / 100 °C

Freezing Point: ~32°F / 0°C

Evaporation Rate: Like water.

Vapor Pressure: Not Available

Coefficient of Water/Oil

Distribution:

Not Available

pH: Neutral

Volatiles (Weight %): 100%

VOC Content: 60.4 g/l

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Avoid heat and flame.

Materials to Avoid: Strong oxidizing agents, strong acids. Contact with acids will cause a heat-

releasing reaction. Avoid contact with aluminum, zinc, and their alloys.

11. TOXICOLOGICAL INFORMATION

Toxicity to Animals: 1-Butoxy-2-propanol LD₅₀ (oral rat) 2,124-5,500 mg/kg

LD₅₀ (dermal rat) >2,000 mg/kg

Dipropylene glycol LD_{50} (oral rat) >5,000 mg/kg monomethyl ether LD_{50} (dermal rabbit) 9,510 mg/kg

 LC_{50} (definal rabbit) 3,376 mg/kg LC_{50} (inhl rat) 3.35 mg/l, 7 hours

Isopropanol LD₅₀ (oral mouse) 3,600 mg/kg

 LD_{50} (dermal rabbit) 12,800 mg/kg LC_{50} (inhl rat) 16,000 ppm, 8 hours

Chronic Exposure: Not Available

Carcinogenic Status: This substance has not been identified as a carcinogen or probable

carcinogen by NTP, IARC, or OSHA, nor have any of its components.

Reproductive Toxicity: Not Available

Mutagenicity: Not Available

Teratogencity: Not Available

Toxicologically Synergistic

Products: Not Available

12. ECOLOGICAL INFORMATION

Mobility: No information available.

Bioaccumulation: Material is expected to be biodegradable.

Ecotoxicity: No information available.

Aquatic Toxicity: Material is practically non-toxic to aquatic organisms.

1-Butoxy-2-propanol 96 h LC_{50} guppy: $560 - 1,000 \mu l/l$

48 h LC₅₀ Daphnia magna: >1,000 mg/l

Dipropylene glycol 96 h LC_{50} Fathead Minnow: > 10,000 μ l/l monomethyl ether 48 h LC_{50} Daphnia magna: 1,919 mg/l

Isopropanol 96 h LC₅₀ Fathead Minnow: $> 1000 \mu l/l$

48 h LC₅₀ Golden Orfe: 8970 - 9280 mg/l

96 h LC₅₀ Daphnid: > 1000 μl/l

13. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with National and Local Regulations.

14. TRANSPORTATION INFORMATION

UN Number: Not Listed

UN Proper Shipping Name: Not Applicable

Class and Subsidiary Risk: Not Applicable

Packing Group: Not Applicable

TDG: Not Regulated

ICAO/IATA-DGR: Not Regulated

IMDG: Not Regulated

ADR/RID: Not Regulated

15. REGULATORY INFORMATION

USA Federal and State

All components are listed on the TSCA inventory.

Hazard Categories for SARA Acute Chronic Fire Pressure Reactive Section 311/312 Reporting No No No No

CERCLA/SARA Sec 302 SARA Sec. 313
Components Hazardous Substance RQ EHS TPQ Toxic Release

Components are not affected by these Superfund regulations.

European Union

Product is not classified as hazardous according to European Directives 88/379/EEC and 67/548/EEC and EU Regulation (EC) No 1272/2008.

Risk Phrases: Not Applicable

Safety Phrases: Not Applicable

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. It does not contain Substances of Very High Concern (SVHC).

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Classification: NC

Canadian DSL: All ingredients listed.

Australia

All components are listed on the AICS.

Not considered hazardous according to criteria of NOHSC Australia.

16. OTHER INFORMATION

NFPA Ratings: Health: 1 Fire: 0

Fire: 0 Reactivity: 0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

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Revision Number:

Reviewed By: S.H. Dahlke

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

AQ:MSDS