Coburn Technologies, Inc.
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Safety Data Sheet
Dry Wash

1. IDENTIFICATION

Synonyms **none**
Material Use **lens cleaner**

IN AN EMERGENCY CALL: INFOTRAC 1-800-535-5053

2. HAZARD IDENTIFICATION

GHS Class	*flammable*	*eye irritant*
(Category)	*(3)*	*(2A)*
Signal Words	***WARNING***	***WARNING***
Hazard Statements	*flammable liquid and vapor (H226)*	*causes serious eye irritation (H319)*

GHS Precautionary Statements for Labeling

P210 **Keep away from heat, sparks, open flames and hot surfaces. No smoking.**
P262 **Do not get in eyes or on skin.**
P264 **Wash thoroughly after handling.**
P280 **Wear eye protection, protective gloves and clothing of butyl or "Viton".**

3. COMPOSITION

	CAS NUMBER	%	TLV ppm / mg/m^3	LD_{50} (*mg/kg*) ORAL	LD_{50} (mg/kg) SKIN	LC_{50} ppm INHALATION
1-Propoxy-2-Propanol	1569-01-3	30%	100 / 480*	2500	2805	>2450
Water	7732-18-5	70%	not toxic	90,000	not toxic	not toxic

**** Manufacturer's Recommendation***

4. FIRST AID

SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.

EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim's breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

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5. FLAMMABILITY & FIRE-FIGHTING

Flash Point	58°C / 136°F (closed cup)
Autoignition Temperature	260°C / 500°F
Flammable Limits	1.1% – 15%
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments (including formaldehyde, acetaldehyde, methylglyoxal & other irritating aldehydes)
Firefighting Precautions	alcohol resistant foam, dry chemical, water fog or spray; firefighters must wear SCBA
Static Charge Accumulation	cannot accumulate a static charge on agitation or pumping

6. ACCIDENTAL RELEASE MEASURES

Leak Precaution	dike to control spillage and prevent environmental contamination
Handling Spill	ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal

7. HANDLING & STORAGE

Store in a cool, dry environment, away from sources of ignition, heat and oxidizing agents. Ensure that containers are full & well-sealed. Empty containers may contain a flammable or explosive vapor. Keep containers tightly sealed unless in use.

Avoid breathing product vapor. Use with adequate ventilation. If dealing with a spill, and ventilation is impossible or impractical, wear a suitable respirator with organic vapor cartridge.

Avoid contact with skin and wash work clothes frequently. An eye bath should be available near the workplace.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

ACGIH TLV	not listed	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed

Manufacturer's Recommendation: 100ppm / 480mg/m^3

Ventilation	mechanical ventilation is probably not required unless product is strongly heated
Hands	no special protective gloves required; butyl rubber or "Viton" are resistant – *other types may also protect; consult supplier to confirm suitability*
Eyes	safety glasses with side shields – *always protect the eyes*
Clothing	no special protective clothing required

9. PHYSICAL AND CHEMICAL PROPERTIES

Odor & Appearance	clear, colorless liquid with mild, pleasant ether odor
Odor Threshold	not known
Vapor Pressure	as for water
Evaporation Rate (*Butyl Acetate = 1*)	as for water
Vapor Density (air = 1)	4.1 (*PnP*), 0.6 (*water*)
Boiling Range	100°C to 150°C / 212°F to 302°F
Freezing Point	not known – *well below 0°C / 32°F*
Specific Gravity	not known – approx. 0.9
Water Solubility	complete
Also soluble in	most organic solvents
Log $P_{o/w}$ (Octanol/H_2O partition)	0.49
Viscosity	not known – *thin mobile liquid*
pH	none – (*does not liberate hydrogen ions when dissolved*)
Molecular Weight	118grams per mole (*PnP*), 18grams per mole (*water*)

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10. REACTIVITY

Dangerously Reactive With	strong oxidizing agents may cause fire; may react violently
Also Reactive With	inorganic hypochlorites to form explosive organic hypochlorites and/or chloroform (toxic); reacts with epoxides; reacts with halogen gases & alkali metals to release hydrogen & a strong alkali; reacts with strong acids, aldehydes & some ketones to cause heating
Stability	stable; will not polymerize
Decomposes in Presence of	on prolonged exposure to air
Decomposition Products	potentially explosive peroxides
Sensitive to Mechanical Impact	no

11. TOXICITY INFORMATION

i. *ACUTE EXPOSURE*

Skin Contact	mildly irritating; irritation may become more severe with prolonged contact
Skin Absorption	yes, but no toxic effects anticipated by this route
Eye Contact	severely irritating in animals – *presumed irritating in humans*
Inhalation	high concentrations (*saturated vapor*) may irritate & cause headache, dizziness, nausea, etc.
Ingestion	may cause headache, nausea, vomiting – *not a route of industrial exposure*
Calculated LD_{50} (oral)	9580mg/kg (rat), (♀)8300 & (♂)14,500mg/kg (rat),
Calculated LD_{50} (skin)	9350 & 11,780mg/kg (rabbit) (♂)12,670 & (♀)14,500mg/kg (rabbit)
Calculated LC_{50} (inhalation)	>8170ppm (rat) – *no mortality seen*

ii. *CHRONIC EXPOSURE*

General	prolonged exposure may cause dermatitis & inflamed (red) skin
Sensitizing	not a sensitizer in humans or animals
Carcinogen/Tumorigen	not considered a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect in humans, *teratogen in rats (but not rabbits) at doses causing maternal toxicity*
Mutagen	no known effect on humans or animals
Synergistic With	not known

12. ECOLOGICAL INFORMATION

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades readily in the presence of oxygen; 90% in 7 days[1]
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 15 hours
Mobility in soil, water	water soluble; moves readily in soil and water
Aquatic Toxicity	
LC_{50} (Fish, 96hr)	above 100mg/litre (Oncorhynchus mykiss)[1]
EC_{50} (Crustacea, 48hr)	above 100mg/litre (Daphnia magna)[1]
EC_{50} (Algæ)	3440mg/litre (Pseudokirchnerella subcapitata – *new name for Selenastrum capricornutum*)[1]
EC_{50} (Bacteria)	no data

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13. DISPOSAL CONSIDERATIONS

Waste Disposal	**do not flush to sewer**, recycle solvent if possible, may be incinerated in approved facility
Containers	**Drums** should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.
	Pails must be vented and thoroughly dried prior to crushing and recycling.
	IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years.

Warning: never cut, drill, weld or grind on or near this container, even if empty.

14. TRANSPORT INFORMATION

USA 49 CFR & Canada/International TDG

Product Identification Number	**UN – 1993**
Shipping Name	**Flammable liquids, N.O.S. (propylene glycol n-propyl ether)**
Classification	**Class 3; Packing Group III**
Marine Pollution	***not a marine pollutant***
ERAP Required	***No***

NOTE (a): Packing Group III requires no safety marks when transported in a "small" means of containment (less than 500 litres).
NOTE (b): This product's flammability is on the border between UN – 1993 & NA – 1993 (between flammable P.G. III & "Combustible".)

15. REGULATIONS

Canada DSL	**on inventory**
U.S.A. TSCA	**on inventory**
Europe EINECS	**on inventory**

16. OTHER INFORMATION

Date of Preparation	**October 2014**
Date of Revision	**-**

Prepared for Coburn Technologies Inc.
With data from the Registry of Toxic Effects of Chemical Substances (RTECS), Hazardous Substance Data Base (HSDB), Cheminfo (CCOHS), OSHA, IUCLID Datasheets (European Chemical Substance Information System - ESIS), & others sources (below if used), as required/available

(1) European Chemicals Agency (EChA), dossier on Propylene Glycol n-Propyl Ether:
http://apps.echa.europa.eu/registered/data/dossiers/DISS-9ea983fc-c075-01d0-e044-00144f67d031/AGGR-00a0b8f0-0d97-46f3-9380-67f19941161c_DISS-9ea983fc-c075-01d0-e044-00144f67d031.html#AGGR-00a0b8f0-0d97-46f3-9380-67f19941161c

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PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.

EMERGENCY INFORMATION: INFOTRAC 1-800-535-5053