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Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product name MU UP 2002

Product use General Purpose Cleaner

Product code 1223

Date of issue 09/20/10 **Supersedes** 12/14/07

Emergency Telephone Numbers

For MSDS Information:
Technical Services Group
Telephone (780) 453-8100
(Business Hours 8:00am - 5:00pm)

For Medical or Transportation Emergency
CANUTEC (24 Hours)
(613) 996-6666 - Call Collect

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Prepared By
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Section 2. Hazards Identification

Emergency overview

DANGER !

CAUSES EYE BURNS. CAUSES SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.

Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Contains material that may cause target organ damage, based on animal data. Use only with adequate ventilation.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Dermal contact. Eye contact. Inhalation.

Eyes Corrosive to eyes. Eye exposure may cause severe and permanent eye injury (blindness).

Skin Harmful in contact with skin. Irritating to skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering. The amount of tissue damage depends on length of contact.

Inhalation Overexposure of this product by inhalation or absorption can produce central nervous system depression resulting in headache, nausea and/or dizziness.

Ingestion Harmful if swallowed. May cause burns to mouth, throat and stomach.

Chronic effects Repeated or prolonged skin contact may produce chronic inflammation or dermititis, characterized by redness, scaling or itching. Repeated eye exposure may produce chronic inflammation of the eye or corneal damage. Animal studies indicate a potential for liver, kidney or red blood cell damage. Relevance of these studies or exposure levels which might produce these effects in humans has not been established. Pre-existing respiratory and skin disorders may be aggravated by over-exposure to this product.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
PROPYLENE GLYCOL N-BUTYL ETHER; 1-butoxy-2-propanol	5131-66-8	5 - 10
DIPROPYLENE GLYCOL METHYL ETHER; dipropylene glycol monomethyl ether	34590-94-8	5 - 10
MONOETHANOLAMINE; 2-aminoethanol; MEA	141-43-5	1 - 5
TETRASODIUM ETHYLENEDIAMINE TETRAACETATE; ethylenediamine tetraacetic acid; tetrasodium salt	64-02-8	1 - 5

Section 4. First Aid Measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Skin Contact Flush affected skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

Inhalation Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention immediately.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

Section 5. Fire Fighting Measures

Flash Point Not available.

Flammable Limits Not available.

Flammability Non-combustible.

Auto-ignition Temperature Not applicable

Fire-Fighting Procedures Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Use dry chemical, CO_2, water spray (fog) or foam.

Fire hazard In a fire or if heated, a pressure increase will occur and the container may burst.

Products of Combustion carbon oxides (CO, CO_2) May emit toxic fumes under fire conditions.

Explosion hazard Not available.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Clean the spill area and any tools or implements used several times with detergent soap and water. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Use with adequate ventilation. Wash thoroughly after handling.

Storage Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
Dipropylene Glycol Methyl Ether	**ACGIH TLV (United States, 2003). Skin** TWA: 100 ppm 8 hour(s). STEL: 150 ppm 15 minute(s). **OSHA PEL (United States, 2003). Skin** TWA: 100 ppm 8 hour(s).
Monoethanolamine	**OSHA PEL / ACGIH TLV (United States).** TWA: 3 ppm 8 hour(s). **OSHA /ACGIH (United States).** STEL: 6 ppm 15 minute(s).

Personal Protective Equipment (PPE)

Eyes Recommended: splash goggles

Hands and Body Chemical-resistant gloves. Nitrile gloves. Rubber gloves. Neoprene gloves.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate.

Section 9. Physical and Chemical Properties

Physical State Liquid. [Thin liquid]
pH 13.0 - 13.5 Conc. (1%: 12.0 - 13.0)
Boiling Point 104°C (219.2°F)
Specific Gravity 1.027
Solubility Easily soluble in the following materials: cold water and hot water.
Freezing Point

Color Clear. Green.
Odor Mild. butyl acetate
Vapor Pressure Not available.
Vapor Density Not available.
Evaporation Rate 1 (Water = 1)
VOC (Consumer) 21.1 %

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.
Incompatibility Highly reactive or incompatible with the following materials: oxidizing materials and acids.
Hazardous Polymerization Will not occur.
Hazardous Decomposition Products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Carcinogenicity No known significant effects or critical hazards. Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
3-butoxypropan-2-ol	LD50 Dermal	Rabbit	1400 mg/kg	-
	LD50 Oral	Rat	3300 mg/kg	-
(2-methoxymethylethoxy)propanol	LD50 Dermal	Rabbit	13000 mg/kg	-
	LD50 Oral	Rat	5220 mg/kg	-
Monoethanolamine	LD50 Dermal	Rabbit	>1000 mg/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
Tetrasodium Ethylenediamine Tetraacetate	LD50 Oral	Rat	4100 mg/kg	-

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Not available.

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with applicable regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: No additional information.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN 1760	Corrosive liquid, n.o.s. (sodium metasilicate)	8	II		Explosive Limit and Limited Quantity Index 1
IMDG Class	Not available.	Not available.	Not available.	-		

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment. Limited Quantity: Small quantities of controlled goods are not regulated as Dangerous Goods according to TDG regulations.

PG* : Packing group

Section 15. Regulatory Information

Canada

WHMIS (Canada) Class D-2A: Material causing other toxic effects (Very toxic).
D-2B Material causing other toxic effects. Class E: Corrosive material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.