SAFETY DATA SHEET – PUMP CLEANER

SECTION 1. IDENTIFICATION

Product Identifier	Pump Cleaner
Other Means of Identification	Cleaning solution
Recommended Use	Professional use only
Restrictions on Use	None known
Supplier Identifier	Multiurethanes Ltd. 5245 Creekbank Rd Mississauga, ON L4W 1N3 Canada
Emergency Telephone Number	1-800-663-6633

SECTION 2. HAZARD IDENTIFICATION

Classification

Serious Eye Damage/Eye Irritation	Category 2B

Label Elements

Hazard Pictogram

Signal Word	WARNING
Hazard Statement	Causes eye irritation.
Precautionary Statements	***Prevention*** Wear appropriate protective equipment. Avoid breathing fume/mist/vapours. Wash hands and exposed skin after handling.

Response
IF ON SKIN: Wash thoroughly after handling. Seek medical attention if concerned.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
IF INHALED: Remove person to fresh air. Seek medical attention if concerned.

Storage
Store away from incompatible materials.

Disposal
Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the sole responsibility of the waste generator.

Other Hazards

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be mildly irritating to the skin and respiratory system.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No.	Concentration (% by weight)	Common Names / Synonyms	Other Identifiers
Pentanedioic acid, dimethyl ester	1119-40-0	60 - 61%	Glutaric acid, dimethyl ester, DBE-5 dibasic ester	Not available
Dimethyl succinate	106-65-0	21 - 22%	Butanedioic acid, dimethyl ester, Dimethyl butanedioate	Not available
Dimethyl Adipate	627-93-0	17 - 18%	Hexanedioic acid, dimethyl ester, Dimethyl hexanedioate	Not available

Notes

The % concentrations for the above listed chemicals will vary from batch to batch. Concentrations listed represent the actual concentration range for each chemical.

SECTION 4. FIRST-AID MEASURES

Inhalation

If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Obtain medical attention if symptoms develop and persist.

Skin Contact	Wash off immediately with plenty of water. Remove and wash contaminated clothing before re-use. If irritation or symptoms develop, seek medical attention.
Eye Contact	Immediately flush eyes with running water for at least 5 to 10 minutes. If irritation persists, seek prompt medical attention.
Ingestion	Do not induce vomiting. Have victim rinse mouth with water then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Seek medical attention.
Most Important Symptoms and Effects, Acute and Delayed	Causes eye irritation. Symptoms may include tearing, redness and discomfort. Direct skin contact may cause slight or mild, transient irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Indication of Immediate Medical Attention and Special Treatment Needed	Treat symptomatically. If exposed or concerned, seek medical advice and attention.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media	Use media suitable to the surrounding fire such as water fog or fine spray, carbon dioxide, and dry chemical.
Unsuitable Extinguishing Media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.
Specific Hazards Arising from the Product	Burning may produce irritating, toxic and obnoxious fumes. Hazardous combustion products may include carbon oxides.
Special Protective Equipment and Precautions for Firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	Do not get in eyes or on skin. Do not breathe fume/mist/vapours. Use appropriate personal protective equipment. Evacuate danger area. Equip cleanup crew with proper protection.
Methods and Material for Containment and Cleaning Up	Ventilate area of release. Stop spill or leak at source if safely possible. Dike for water control. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see section 13).
Notification Procedures	Not available
Environmental Precautions	Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling	Use only in well-ventilated areas. Wear suitable protective equipment during handling. Avoid breathing vapours or mists. Avoid contact with eyes, skin and clothing. Keep away from extreme heat and flame. Keep away from incompatibles. Keep containers tightly closed when not in use. Good housekeeping is needed during storage, transfer, handling, and use of this material. Handle in accordance with good industrial hygiene and safety procedures. Always wash hands immediately after handling this product.
Conditions for Safe Storage (including incompatibilities)	Store away from incompatible materials; strong oxidizers (e.g. chlorine, peroxides, etc.), strong acids and strong alkalis. No smoking in the area.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters – Occupational Exposure Limits

Chemical Name	Type	Exposure Limit Values	Source
Pentanedioic acid, dimethyl ester	Not available	Not available	Not available
Dimethyl succinate	Not available	Not available	Not available
Dimethyl Adipate	Not available	Not available	Not available

Appropriate Engineering Controls	Use in a well-ventilated area. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
Individual Protection Measures	
Eye/Face Protection	Wear safety glasses with side shields or chemical goggles as appropriate to prevent eye contact.
Skin Protection	Gloves impervious to the material are recommended. Advice should be sought from glove suppliers. Wear sufficient clothing to prevent skin contact.
Respiratory Protection	If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Advice should be sought from respiratory protection specialists.
Hygiene Measures	Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear colourless liquid
Odour	None
Odour Threshold	Not available
pH	Not available
Melting Point / Freezing Point	-20°C (-4°F)
Initial Boiling Point and Boiling Range	196 - 225°C (384.8-437°F)
Flash Point	Closed cup: 100°C (212°F)
Evaporation Rate (BuAe = 1)	Not available
Flammability (solid, gas)	Not applicable

Upper/Lower Flammability or Explosive Limits	
Flammability Limit – Upper (%)	8%
Flammability Limit – Lower (%)	0.9%
Explosive Limit – Upper (%)	Not explosive
Explosive Limit – Lower (%)	Not explosive
Vapour Pressure	0.2 mmHg
Vapour Density (air = 1)	> 1
Relative Density (water = 1)	1.09
Solubility in Water	Partially soluble
Solubility (other)	Not available
Partition Coefficient, n-octanol / water (logKow)	Not available
Auto-ignition Temperature	370°C (698°F)
Decomposition Temperature	Not available
Viscosity	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Not normally reactive.
Chemical Stability	Stable under recommended handling and storage conditions (refer to section 7).
Possibility of Hazardous Reactions	Hazardous polymerization does not occur.
Conditions to Avoid	Avoid excessive heat, sparks and open flame. Avoid contact

	with incompatible materials.
Incompatible Materials	Strong oxidizers (e.g. chlorine, peroxides, etc.), strong acids and strong alkalis.
Hazardous Decomposition Products	None known

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation	Yes
Skin Contact	Yes
Eye Contact	Yes
Ingestion	Yes

Signs and Symptoms of Exposure

Inhalation
If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract.

Skin Contact
Direct skin contact may result in little or no irritation.

Eye Contact
Causes eye irritation. Symptoms may include tearing, redness and discomfort.

Ingestion
Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea.

Potential Chronic Health Effects	Prolonged or repeated contact may cause drying, cracking and defatting of the skin.
Acute Toxicity	Not available
Skin Corrosion/Irritation	Not available
Serious Eye Damage/Irritation	Not available

Specific Target Organ Toxicity - Single Exposure	Not available
Specific Target Organ Toxicity - Repeated Exposure	Not available
Aspiration Hazard	Not available
Respiratory and/or Skin Sensitization	Not expected to be a skin or respiratory sensitizer.
Reproductive Toxicity	Not expected to cause reproductive effects.
Germ Cell Mutagenicity	Not expected to be mutagenic in humans.
Carcinogenicity	No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Toxicological Data

Chemical Name	LC50	LD50
Pentanedioic acid, dimethyl ester	> 11 mg/L (aerosol) (No mortality) (Read-across) (4hr, inhalation, rat)	> 5000 mg/kg (oral, rat) > 2000 mg/kg (No mortality) (dermal, rabbit)
Dimethyl succinate	> 5.9 mg/L (aerosol) (No mortality) (Read-across) (4hr, inhalation, rat)	> 5000 mg/kg (oral, rat) > 2000 mg/kg (No mortality) (dermal, rabbit)
Dimethyl Adipate	> 11 mg/L (aerosol) (No mortality) (Read-across) (4hr, inhalation, rat)	> 5000 mg/kg (oral, rat) > 5000 mg/kg (dermal, rabbit)

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	Not expected to be harmful to aquatic organisms. Do not allow material to contaminate ground water system. Refer to published ecotoxicity data for each component.
Persistence and Degradability	Readily biodegradable.
Bioaccumulative Potential	Not expected to bioaccumulate.
Mobility in Soil	High water solubility indicates a high mobility in soil.
Other Adverse Effects	Not available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the sole responsibility of the waste generator.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group
TDG	None	Not regulated	Not regulated	Not regulated	Not regulated
49 CFR/DOT	None	Not regulated	Not regulated	Not regulated	Not regulated
IMDG	None	Not regulated	Not regulated	Not regulated	Not regulated
ICAO/IATA	None	Not regulated	Not regulated	Not regulated	Not regulated

Special Precautions None known or reported by the manufacturer.

Environmental Hazards This substance does not meet the criteria for an environmentally hazardous substance according to the IMDG code. Refer to section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available

SECTION 15. REGULATORY INFORMATION

Canadian Information

WHMIS — Refer to section 2.

CEPA — All ingredients listed appear on the Domestic Substances List (DSL).

US Information

TSCA Inventory — All components in this product are listed on the Inventory.

State Regulations — Not available

SAFETY DATA SHEET – PUMP CLEANER

International Information

Ingredients	EU (EINECS)	Australia (AICS)	Philippines (PICCS)	Japan (ENCS)	Korea (KECI/KECL)	China (IECSC)	New Zealand (IOC)
Pentanedioic acid, dimethyl ester	214-277-2	Present	Present	(2)-925; (2)-857	KE-27978	Present	HSR003381
Dimethyl succinate	203-419-9	Present	Present	(2)-848	KE-03764	Present	HSR003468
Dimethyl Adipate	211-020-6	Present	Present	(2)-879; (2)-861	KE-18697	Present	HSR003467

SECTION 16. OTHER INFORMATION

Date of Latest Revision August 28, 2018

Disclaimer The information provided in this document is correct to the best of our knowledge, information and belief at the date of its publication. This information is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition. This information is designed only as a general guidance and is not to be considered a warranty or quality specification. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified above.

END OF SAFETY DATA SHEET