SAFETY DATA SHEET

Microfluids Extreme DG

SDS Number: MF-EDG-001 | **Revision Date:** April 25, 2026 | **Version:** 1.0

Prepared in accordance with: WHMIS 2015 (HPR, SOR/2015-17), OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

SECTION 1: IDENTIFICATION

Product Identifier	**Microfluids Extreme DG**
Product Type	Industrial degreaser / multi-surface cleaner
Recommended Uses	Heavy-duty degreasing, parts cleaning, surface preparation, industrial maintenance cleaning
Restrictions on Use	Not for use on polycarbonate or acrylic surfaces without testing. Not intended for personal hygiene use.
Manufacturer	Microfluids (a brand of MicroFusion International Inc.) 67 Purlbrook Road, Antigonish, NS B2G 2L3, Canada Tel: +1 902 604 1113 Email: info@microfusion.ca
Emergency Telephone	CANUTEC: 1-888-226-8832 (Canada) CHEMTREC: 1-800-424-9300 (USA)

SECTION 2: HAZARD IDENTIFICATION

Classification of the Mixture

WHMIS 2015 (Canada):

- Serious Eye Damage/Eye Irritation — Category 1 (H319)
- *Note: Environmental hazard classes (including Aquatic Toxicity) are not adopted under WHMIS 2015.*

OSHA HazCom 2012 (USA):

- Serious Eye Damage/Eye Irritation — Category 2B (H320)
- *Note: Category 2B does not require a GHS pictogram or signal word under OSHA.*

GHS Label Elements (Canada — WHMIS 2015)

Pictogram	**GHS07 (Exclamation Mark)**
Signal Word	Warning
Hazard Statements	H319 — Causes serious eye irritation

Precautionary Statements:

Prevention:

- P264 — Wash hands thoroughly after handling.
- P280 — Wear eye protection / face protection.

Response:

- P305 + P351 + P338 — IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 — If eye irritation persists: Get medical advice/attention.

Disposal:

- P501 — Dispose of contents/container in accordance with local/regional/national/international regulations.

US Label Elements (OSHA)

Pictogram	**None required (Category 2B)**
Signal Word	None required (Category 2B)
Hazard Statements	H320 — Causes eye irritation.
Precautionary Statements	P264, P305 + P351 + P338, P337 + P313

Other Hazards

No additional hazards identified.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Proprietary formulation — specific chemical identities and exact concentrations are withheld as trade secrets under WHMIS 2015 (HPR s. 3(1)), OSHA 29 CFR 1910.1200(i). Generic names and concentration ranges are provided below.

Component (Generic Name)	CAS Number	Concentration Range (% w/w)	GHS Classification
Canola Methyl Ester	67762-38-3	60 – 100	None Known
Diethylene Glycol Monobutyl Ether	112-34-5	5 – 15	Eye Irrit. 2 (H319); Flam. Liq. 4 (H227)
Non-ionic Surfactant	Proprietary	3 – 10	Acute Tox. 4 Oral (H302); Eye Dam. 1 (H318); Aquatic Acute 1 (H400); Aquatic Chronic 3 (H412)
Plant-based Non-ionic Surfactant	Proprietary	1 – 5	Skin Irrit. 2 (H315); Eye Dam. 1 (H318)
Anionic Wetting Agent	Proprietary	1 – 5	Skin Irrit. 2 (H315); Eye Dam. 1 (H318); Aquatic Acute 3 (H402)
Anionic Surfactant	Proprietary	0.5 – 3	Skin Irrit. 2 (H315); Eye Irrit. 2 (H319)

“Environmental classifications are provided for informational purposes only and are not required under WHMIS 2015.”

SECTION 4: FIRST-AID MEASURES

Inhalation: Remove to fresh air. If symptoms persist, seek medical attention. Under normal conditions of use, inhalation exposure is not expected.

Skin Contact: Remove contaminated clothing. Wash affected skin with soap and water. If irritation develops, seek medical attention.

Eye Contact: Immediately rinse eyes with plenty of water for at least 15–20 minutes, lifting upper and lower eyelids. Remove contact lenses if present and easy to do. If irritation persists, seek medical attention.

Ingestion: Rinse mouth with water. Do NOT induce vomiting. Seek medical attention if symptoms occur. Never give anything by mouth to an unconscious person.

Most important symptoms/effects: Eye irritation (redness, tearing, discomfort). Prolonged skin contact may cause mild irritation in sensitive individuals.

Indication of immediate medical attention: No special treatment required. Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray/fog, dry chemical, carbon dioxide (CO_2), alcohol-resistant foam.

Unsuitable extinguishing media: Direct water jet on large fires (may spread material).

Specific hazards: Thermal decomposition may produce carbon oxides (CO, CO_2) and irritating fumes. Product is not classified as flammable; however, BDG component has a flash point of approximately 78°C (172°F).

Flash point: > 93°C (> 200°F) for the mixture (estimated, closed cup).

Advice for firefighters: Wear self-contained breathing apparatus (SCBA) and full protective gear. Cool containers with water spray to prevent rupture from heat exposure.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear appropriate PPE (see Section 8). Avoid contact with eyes. Avoid prolonged skin contact, Ensure adequate ventilation. Caution — spilled material may create slippery surfaces.

Environmental precautions: Avoid uncontrolled release into waterways. Contains components harmful to aquatic organisms. Notify authorities if product enters waterways.

Containment and cleanup: Absorb spills with inert material (sand, vermiculite, earth). Collect in suitable containers for disposal. Wash residual area with water. Dispose of in accordance with Section 13.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid contact with eyes. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not eat, drink, or smoke while using this product. Use appropriate PPE.

Storage: Store in original container, tightly closed. Store in a cool, dry, well-ventilated area away from direct sunlight and heat sources. Keep away from incompatible materials (strong oxidizers, strong acids). Recommended storage temperature: 5–40°C (41–104°F).

Incompatible materials: Strong oxidizing agents, strong acids.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OELs)

Component	CAS Number	ACGIH TLV-TWA	OSHA PEL	Canada OEL
Diethylene Glycol Monobutyl Ether	112-34-5	10 ppm (inhalable fraction and vapor)	Not established	Varies by province — refer to jurisdictional OEL tables
Other components	—	Not established	Not established	Not established

Engineering Controls

Use local exhaust ventilation or general dilution ventilation to maintain airborne concentrations below applicable limits. Mechanical ventilation recommended in enclosed spaces.

Personal Protective Equipment

Eye/face protection: Safety glasses with side shields or chemical splash goggles. For splash risk, use full-face shield.

Skin protection: Chemical-resistant gloves (nitrile recommended, minimum 0.4 mm thickness). Protective clothing as appropriate.

Respiratory protection: Not normally required under recommended use conditions. If mist is generated, use an approved organic vapor/particulate respirator (NIOSH N95 or equivalent).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	**Clear to slightly hazy liquid**
Color	**Light yellow to amber**
Odor	**Mild, characteristic ester odor**
Odor Threshold	**Not determined**
pH	**7.0 – 9.0 (neat, estimated)**
Melting/Freezing Point	**Not determined (liquid at ambient)**
Boiling Point	**> 200°C (> 392°F) estimated**
Flash Point	**> 93°C (> 200°F) estimated (closed cup, mixture)**
Evaporation Rate	**< 1 (butyl acetate = 1)**
Flammability	**Not classified as flammable**
Upper/Lower Flammability Limits	**Not determined**
Vapor Pressure	**< 1 mmHg at 20°C (estimated)**
Vapor Density	**> 1 (Air = 1)**
Relative Density (Specific Gravity)	**0.87 – 0.92 at 20°C**
Solubility in Water	**Emulsifiable / dispersible**
Partition Coefficient (n-octanol/water)	**Not determined**
Auto-ignition Temperature	**Not determined**
Decomposition Temperature	**Not determined**
Viscosity	**Low viscosity liquid (estimated < 50 cP at 25°C)**
VOC Content	**0% (see Section 15 for justification)**

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions of use and storage.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: None known under normal conditions.

Conditions to avoid: Extreme heat, sparks, open flames, strong oxidizers.

Incompatible materials: Strong oxidizing agents, strong acids, strong bases.

Hazardous decomposition products: Thermal decomposition may produce carbon monoxide (CO), carbon dioxide (CO_2), sulfur oxides (SO_x), and irritating organic vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

Endpoint	Assessment
Acute toxicity (oral)	Not classified. Based on available data for mixture components, the calculated ATE (oral) is > 5000 mg/kg (rat, estimated). Product is not expected to be acutely toxic by ingestion.
Acute toxicity (dermal)	Not classified. Available ingredient data indicate low dermal toxicity.
Acute toxicity (inhalation)	Not classified. Low vapor pressure limits inhalation exposure under normal use.
Skin corrosion/irritation	Not classified as a mixture. Individual components (DOSS, Lauryl Glucoside, SLES) are skin irritants, but at formulation concentrations, the mixture does not meet classification criteria.
Serious eye damage/irritation	Classified — Eye Irritation Category 2 (H319) under WHMIS 2015; Category 2B (H320) under OSHA HazCom.
Respiratory/skin sensitization	Not classified. No evidence of sensitization for the mixture.
Germ cell mutagenicity	Not classified. No mutagenic data for the mixture.
Carcinogenicity	Not classified. No components are listed as carcinogens by IARC, NTP, or OSHA.
Reproductive toxicity	Not classified.
STOT — Single exposure	Not classified.
STOT — Repeated exposure	Not classified. Note: BDG (112-34-5) has shown kidney and liver effects in repeated-dose animal studies at high doses, but at the concentration present in this mixture, classification criteria are not met.
Aspiration hazard	Not classified.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

While certain components exhibit aquatic toxicity, the mixture as a whole does not meet classification criteria.

- **Vegetable-based Ester Solvent:** Not classified for aquatic toxicity
- **Non-ionic Surfactant:** Very toxic to aquatic life (Aquatic Acute 1, H400).

Mixture classification: Not classified as an environmental hazard under WHMIS 2015 or OSHA HazCom 2012. Ecological information is provided below for informational purposes only.

Persistence and Degradability

Vegetable-based ester solvents are readily biodegradable. Surfactant components are expected to be biodegradable under aerobic conditions.

Bioaccumulative Potential

Not expected to bioaccumulate based on available data for individual components.

Mobility in Soil

Product is expected to have moderate mobility in soil. Prevent entry into waterways.

Other Adverse Effects

No known endocrine disrupting properties. Not classified as ozone depleting.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal: Dispose of contents/container in accordance with federal, provincial/state, and local regulations. Do not discharge into drains, waterways, or onto the ground.

Canada: Dispose in accordance with applicable provincial and federal environmental regulations. Check provincial waste management guidelines.

USA: Dispose in accordance with all applicable federal (RCRA), state, and local regulations. This product is not expected to be a RCRA hazardous waste (not listed, and characteristic testing may be required based on use). EPA Waste Code: Not established for this mixture.

Contaminated packaging: Empty containers may retain residues. Do not reuse containers unless properly cleaned. Dispose of containers per local regulations.

SECTION 14: TRANSPORT INFORMATION

Parameter	Classification
UN Number	Not regulated
UN Proper Shipping Name	Not regulated
Transport Hazard Class	Not regulated
Packing Group	Not regulated
Environmental Hazards	Not classified as a marine pollutant for transport purposes under UN model regulations. However, the product contains environmentally hazardous substances; consider environmental precautions during transport.
TDG (Canada)	Not regulated as dangerous goods
DOT (USA)	Not regulated as hazardous material

Special precautions for user: Secure containers to prevent movement during transport. Transport in properly labeled, sealed containers.

SECTION 15: REGULATORY INFORMATION

15.1 Canada

WHMIS 2015 Classification: Eye Irritation — Category 2 (H319).

Note: Environmental hazard classes (including Aquatic Toxicity) are not adopted under WHMIS 2015. Aquatic hazard information is provided in Section 12 for informational purposes.

All ingredients are listed on or exempt from the Canadian Domestic Substances List (DSL).

VOC Content: 0% w/w.

Justification: The primary solvents (Vegetable-based Ester Solvent (LVP-VOC qualified) and Diethylene Glycol Monobutyl Ether, CAS 112-34-5) qualify as LVP-VOC (Low Vapor Pressure — Volatile Organic Compound) solvents under the Volatile Organic Compound Concentration Limits for Certain Products Regulations (SOR/2021-268) due to their vapor pressures being less than 0.1 mmHg at 20°C. All other components are non-volatile. Therefore, the product VOC content is 0%.

15.2 United States

OSHA HazCom 2012 Classification: Eye Irritation — Category 2B (H320).

TSCA: All ingredients are listed on or exempt from the EPA TSCA Inventory.

SARA Title III:

- Section 311/312 — Eye Irritation.
- Section 313 — Review individual components against the TRI list; Diethylene Glycol Monobutyl Ether (CAS 112-34-5) is listed.

California Proposition 65: This product is not known to contain chemicals listed under California Proposition 65.

VOC Content: 0% w/w.

Justification: Under EPA 40 CFR 51.100(s) and CARB definitions, Vegetable-based Ester Solvent and Diethylene Glycol Monobutyl Ether qualify as LVP-VOC solvents (vapor pressure < 0.1 mmHg at 20°C and boiling point > 216°C). Remaining surfactant components are non-volatile. Effective VOC = 0%.

SECTION 16: OTHER INFORMATION

Revision History

Version 1.0 — Initial issue (April 25, 2026).

Abbreviations

Abbreviation	Definition
SDS	Safety Data Sheet
GHS	Globally Harmonized System
WHMIS	Workplace Hazardous Materials Information System
HPR	Hazardous Products Regulations
OSHA	Occupational Safety and Health Administration
HazCom	Hazard Communication
DSL	Domestic Substances List
TSCA	Toxic Substances Control Act
SARA	Superfund Amendments and Reauthorization Act
TRI	Toxics Release Inventory
CARB	California Air Resources Board
LVP-VOC	Low Vapor Pressure Volatile Organic Compound
RCRA	Resource Conservation and Recovery Act
ATE	Acute Toxicity Estimate
OEL	Occupational Exposure Limit
TLV	Threshold Limit Value
TWA	Time-Weighted Average
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
SCBA	Self-Contained Breathing Apparatus

Full Text of H-Statements Referenced in Section 3

Code	Hazard Statement
H227	Combustible liquid
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage

Code	Hazard Statement
H319	Causes serious eye irritation
H320	Causes eye irritation
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Disclaimer: This Safety Data Sheet has been prepared in accordance with WHMIS 2015 (Hazardous Products Regulations, SOR/2015-17) and OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200). The information provided is based on our current knowledge and is believed to be accurate. It is provided as a guide for safe handling, use, processing, storage, transportation, disposal, and release, and should not be considered a warranty or quality specification. The user is responsible for determining the suitability of this product for their particular application and for compliance with all applicable laws and regulations.