MediRes Corp.

SAFETY DATA SHEET GC203002-100ML

Dimethyl Sulfoxide Biochemical Grade

SECTION 1: Identification

Product identifier: Dimethyl Sulfoxide Biochemical Grade.

MediRes catalogue number: GC203002-100ML

Pack size: 100 mL.

Recommended use: Laboratory solvent and reagent for biochemical research.

Restrictions on use: For research use only. Not for diagnostic, therapeutic, food, household or cosmetic use.

Supplier: MediRes Corp., 109 Elm Street, Sudbury, ON P3C 1T4, Canada. Telephone: +1 705-222-2847. Email: sales@medi-res.com.

Emergency telephone: +1 705-222-2847. For exposure or poisoning, contact a poison control centre or emergency medical service.

SECTION 2: Hazards identification

Classification: Flammable liquids, Category 4.

Hazard communication basis: A flame pictogram is not assigned to flammable-liquid Category 4.

Signal word: WARNING

Hazard pictograms: None assigned on the available classification information.

Code	Hazard statement
H227	Combustible liquid.

Other hazards: DMSO may enhance the passage of dissolved substances through skin. Avoid contact with DMSO and with solutions containing other chemicals.

Prevention: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing dust, mist or spray. P264 - Wash thoroughly after handling. P280 - Wear protective gloves, protective clothing and eye protection.

Response: Follow the first-aid measures in Section 4. P370+P378 - In case of fire: Use dry chemical, carbon dioxide or alcohol-resistant foam.

Storage and disposal: P403+P235 - Store in a well-ventilated place. Keep cool. P501 - Dispose of contents and container through an approved waste service in accordance with applicable regulations.

Unknown acute toxicity: Percentage of ingredients with unknown acute toxicity is not available.

SECTION 3: Composition and information on ingredients

Chemical formula C2H6OS. Exact purity is not specified in the supplier MSDS.

Component	Chemical name	CAS No.	Content
Substance	Dimethyl sulfoxide (DMSO)	67-68-5	≤100%

HMIRA exemption: No registry number or exemption details are supplied.

SECTION 4: First aid measures

Inhalation: Remove to fresh air and keep comfortable for breathing. If breathing is difficult or symptoms persist, obtain medical attention. Trained personnel should provide assisted breathing or oxygen when indicated.

Eye contact: Immediately rinse with plenty of water for at least 15 minutes, lifting the eyelids. Remove contact lenses if present and easy to do; continue rinsing. Obtain medical attention if irritation persists.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water. Obtain medical attention for persistent irritation or rash. Wash contaminated clothing before reuse.

Ingestion: Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical advice after significant ingestion or if symptoms occur.

Symptoms and effects: Mild skin or eye irritation may occur. Dissolved contaminants may produce additional effects because of enhanced skin absorption.

Immediate care and treatment: Treat symptomatically and according to exposure. No product-specific antidote is identified. Seek urgent care for significant breathing difficulty.

SECTION 5: Fire fighting measures

Suitable extinguishing media: Use water spray, dry chemical, carbon dioxide or foam appropriate to the surrounding fire.

Unsuitable media: Avoid a solid water jet that may spread spilled material.

Specific fire hazards: Combustible. Strong heating may form ignitable vapour/air mixtures. Vapours may travel along low areas. Fire produces carbon and sulfur oxides.

Firefighter protection: Wear self-contained breathing apparatus and full protective equipment. Cool exposed containers with water spray when safe. Contain contaminated firefighting water.

SECTION 6: Accidental release measures

Personal precautions: Restrict access to trained personnel. Ventilate the area and wear the protection described in Section 8. Avoid contact and aerosol or dust generation. Eliminate ignition sources.

Containment and cleanup: Stop the leak if safe. Absorb liquid with a compatible inert absorbent. Place waste in closed, labelled, compatible containers. Prevent entry into drains and waterways. Obtain specialist help for large or uncontrolled spills.

SECTION 7: Handling and storage

Safe handling: Use trained laboratory personnel and appropriate ventilation. Avoid inhalation, ingestion and skin or eye contact. Do not eat, drink or smoke during handling. Wash hands after use. Avoid generating aerosols and splashes.

Storage conditions: Store at room temperature in tightly closed containers in a dry, cool, ventilated place. Keep away from heat, flames and strong oxidizers.

Incompatibilities: Strong oxidizing agents. Additional product-specific incompatibility data are not available.

SECTION 8: Exposure controls and personal protection

Control parameters: Product-specific occupational exposure limits and biological exposure indices are not available.

Engineering controls: Use a chemical fume hood for open handling, heating or operations generating vapour/mist. Provide eyewash and safety-shower facilities.

Skin and hand protection: Wear chemical-resistant gloves and a laboratory coat. Select glove material and replacement interval using the glove manufacturer's compatibility data for the product and exposure duration.

Eye and face protection: Wear chemical splash goggles. Add a face shield where substantial splashing is possible.

Respiratory protection: Respiratory protection is not a substitute for ventilation. If ventilation cannot control exposure, use an approved respirator selected for the contaminant and workplace exposure. Emergency responders require suitable supplied-air protection.

SECTION 9: Physical and chemical properties

Property	Information
Physical state	Liquid at typical room temperature; can crystallize below approximately 18 °C.
Colour / appearance	Colourless.
Odour	No data available.
Odour threshold	No data available.
pH	No data available.
Melting / freezing point	16–19 °C (substance reference).
Boiling point / range	189 °C (substance reference).
Flammability	See Section 2; quantitative mixture data are not available.
Lower / upper explosive limits	No data available.
Flash point	87 °C, closed cup (substance reference).
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic viscosity	No data available.
Solubility	Completely miscible with water (substance reference).
Partition coefficient (n-octanol/water)	No data available.
Vapour pressure	0.42 mmHg at 20 °C (substance reference).
Relative density	No data available.
Relative vapour density	2.7 relative to air (substance reference).
Particle characteristics	Not applicable to a liquid.

SECTION 10: Stability and reactivity

Reactivity: Strong oxidizing agents. Additional product-specific incompatibility data are not available.

Chemical stability: Stable under the recommended storage conditions.

Possibility of hazardous reactions: No data available.

Conditions to avoid: Excess heat, ignition sources and direct sunlight; avoid contact with incompatible materials.

Hazardous decomposition products: Carbon oxides and sulfur oxides during thermal decomposition or fire.

SECTION 11: Toxicological information

Likely exposure routes: Skin and eye contact, accidental ingestion and inhalation of mist, vapour or aerosol.

Endpoint	Information
Acute toxicity	Supplier reports: oral rat LD50 28,300 mg/kg; dermal rat LD50 40,000 mg/kg; inhalation rat LC0 >5.33 mg/L, 4 h, dust/mist. LC0 is a no-mortality concentration, not an LC50.
Skin corrosion / irritation	Slight irritation in rabbits after 4 h, reported by supplier.
Serious eye damage / irritation	Slight irritation in rabbits after 24 h, reported by supplier.
Respiratory / skin sensitization	Supplier reports negative guinea-pig maximization and mouse local lymph node tests.
Germ cell mutagenicity	Supplier reports negative Ames testing with and without metabolic activation (OECD 471).
Carcinogenicity	No data available.
Reproductive toxicity	No data available.
STOT, single exposure	No data available.
STOT, repeated exposure	No data available.
Aspiration hazard	No data available.

Immediate and delayed effects: Mild skin or eye irritation may occur. Dissolved contaminants may produce additional effects because of enhanced skin absorption.

Numerical measures: Values stated above are source-reported. Other LD50, LC50 and mixture acute toxicity estimates are not available.

SECTION 12: Ecological information

Ecotoxicity: No data available.

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects: No additional data available. Avoid uncontrolled environmental release.

SECTION 13: Disposal considerations

Disposal methods: Collect unused reagent, contaminated absorbent and containers for disposal through an approved laboratory chemical-waste service. Do not discharge to drains. Empty containers may retain residues. Follow applicable local, provincial and federal waste requirements.

SECTION 14: Transport information

Transport status: The supplier reports the product is not regulated as dangerous goods under IATA, IMDG and US DOT.

UN transport information: UN number, proper shipping name, transport class and packing group: not assigned by the supplier.

Canadian TDG: Canadian TDG classification data are not available.

Environmental transport hazards: No transport-specific environmental hazard data available.

Special precautions: Transport at room temperature. Keep containers tightly closed and protected from damage.

Transport in bulk under IMO instruments: Not applicable to the packaged laboratory product.

SECTION 15: Regulatory information

Canada: Hazard communication uses the 16-section WHMIS SDS structure. Hazard information is stated in Section 2. Canadian inventory status, product-specific regulatory listings and HMIRA exemption information are not available.

Other jurisdictions: Product-specific regulatory determinations are not available. Research-use designation does not establish an exemption from chemical or transport requirements.

SECTION 16: Other information

Preparation / revision date: 7 October 2026. Version 1.0.

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Abbreviations: GHS: Globally Harmonized System; WHMIS: Workplace Hazardous Materials Information System; STOT: specific target organ toxicity; LD50/LC50: median lethal dose/concentration; ATE: acute toxicity estimate; TDG: Transportation of Dangerous Goods; HMIRA: Hazardous Materials Information Review Act.

Disclaimer: This information is intended as guidance for safe handling, use, storage, transport and disposal of the identified material. It is not a warranty or quality specification and may not apply to other formulations, combinations or processes. No batch-specific test data are implied by reference chemical information.

End of Safety Data Sheet