

Safety Data Sheet

Version 1.2

Revision date: Jan 28, 2021



Silica-coated iron oxide (Fe₃O₄) magnetic beads

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier:	Silica-coated iron oxide (Fe ₃ O ₄) magnetic beads
Bead diameter:	400 – 800 nm
Unit size:	5 mL to 100 mL
Manufacturer's name and address:	Luna Nanotech Inc., 439 University Avenue, 5 th Floor Toronto, ON M5G 1Y8
Business telephone number:	1-800-474-4055
Emergency telephone numbers:	Canada: Canutec 1-888-226-8832 USA: Chemtrec 1-800-424-9300
Product use:	For research use only. Not intended for human or animal diagnostic or therapeutic uses.

SECTION 2: HAZARD IDENTIFICATION

Emergency overview:	Harmful if swallowed, inhaled, or contacted with skin.
Routes of entry:	Inhalation, ingestion, skin absorption, or eye contact.
Effect of overexposure:	May cause contact dermatitis.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This Product Contains:	Silica-coated iron oxide magnetic beads
Component 1:	Water, >99% (w/v), CAS 7732-18-5
Component 2:	Iron Oxide (Fe ₃ O ₄), <1% (w/v), CAS 1317-61-9
Component 3:	Silica, <1% (w/v), CAS 7631-86-9

SECTION 4: FIRST AID MEASURES

General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact:	Wash off with soap and plenty of water. Consult a physician.

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In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIREFIGHTING MEASURES

Conditions of flammability: Not flammable

Means of extinction: Use water spray, alcohol-resistant foam, dry chemical or CO₂

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous decomposition products formed under fire conditions: Emits toxic fumes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid contact with the skin and the eyes. Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions: Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Isolate contaminated area and wear appropriate protective clothing. Absorb spillage on appropriate material and place in closed container for proper disposal according to section 13 and wash area with copious amount of water. Make sure to properly ventilate area.

SECTION 7. HANDLING AND STORAGE

Handling: Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation. Wear laboratory coat, gloves and protective glasses during handling. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage: Keep container tightly closed and away from light. This product retains stability when stored between 4-25°C. Do NOT freeze.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection: If exposure limits are exceeded or irritation is experienced, respiratory protection approved under NIOSH/MSHA must be worn. For high airborne

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contaminant concentration positive-pressure supplied air respirators may be required.

Eye protection: Wear safety glasses with side shields conforming to EN166. Avoid contact with the eyes.

Hand protection: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Wear a lab coat.

Skin and body protection: Handle in accordance with good industrial hygiene and safety practice.

Hygiene measures: Use appropriate mechanical exhaust or laboratory fume hood to avoid exposure.

Specific engineering controls:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque brown liquid when beads are resuspended / clear liquid with brown precipitate when beads settle by gravity
Color:	Brown
Odour:	Odourless
Taste:	Not available
pH:	6-8
Boiling point:	Not available
Melting point:	Not available
Flash point:	Not available
Evaporation rate:	Not available
Explosion limits:	Not available
Specific gravity:	Not available
Vapor pressure:	Not available
Vapor density:	Not available
Volatility:	Not available
Solubility:	Not available
Thermal decomposition:	Not available
Viscosity:	Not available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Incompatible products: Not available

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation: May be harmful if inhaled

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Eye contact:	May be harmful in contact with the eyes
Ingestion:	May be harmful if ingested
Skin contact:	May be harmful if contact with the skin
Germ cell mutagenicity:	Not available
Carcinogenicity:	Not available
Reproductive toxicity:	Not available
STOT-singe exposure:	Not available
STOT-repeated exposure:	Not available

SECTION 12: ECOLOGICAL INFORMATION

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Product:	The product should not be allowed to enter drains, watercourses or the soil. Disposing should be performed in compliance with local and national regulation by a licensed waste management company.
Contaminated packaging:	Dispose of as unused product. Do not reuse empty containers.

SECTION 14: TRANSPORT INFORMATION

Not regulated.

SECTION 15: REGULATORY INFORMATION

OSHA Hazard

Flammable liquid, Irritant, Target Organ Effect

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

WHMIS (Canada): Not regulated

HMIS (U.S.A): Not regulated

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.

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SECTION 16: OTHER INFORMATION

The above information provided in this Materials Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of publication. The information given is designed only as a guidance for safe handling, processing, use, transportation, storage, disposal and release. This information is not to be considered a warranty or quality specification. The 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 in the text.

End of Material Safety Data Sheet