

SAFETY DATA SHEET

Section 1 Identification of the substance/preparation & company/undertaking:

1.1 Product Identifier

Catalog Number	Product Description
FMFc-25-5	Goat anti-Mouse IgG (Fc) Coated Ferromagnetic Particles, 1.0% w/v, 2.0-2.9 µm, 5 mL
FMFc-40-5	Goat anti-Mouse IgG (Fc) Coated Ferromagnetic Particles, 1.0% w/v, 4.0-4.5 µm, 5 mL
SVFM-20-5	Streptavidin Coated Ferromagnetic Particles, 1.0% w/v, 2.0-2.9 µm, 5 mL
SVFM-40-5	Streptavidin Coated Ferromagnetic Particles, 1.0% w/v, 4.0-4.9 µm, 5 mL
SVFM-80-4	Streptavidin Coated Ferromagnetic Particles, 1.0% w/v, 8.0-8.9 µm, 4 mL
SVFM-100-4	Streptavidin Coated Ferromagnetic Particles, 1.0% w/v, 10.0-13.9 µm, 4 mL

1.2 Relevant identified uses of the substance & uses advised against

This material is only for purpose of technical analysis and/or scientific research. The health, toxicological, & ecotoxicological hazards of this substance have not been fully investigated; therefore, this substance must be handled only by, or under close supervision of those qualified in the handling and use of potentially hazardous substances. Not for domestic or food/drug/cosmetic use.

1.3 Details of the supplier of the safety data sheet

Spherotech, Inc.
27845 Irma Lee Circle
Lake Forest, IL 60045-5100 U.S.A.
Tel: (847) 680 – 8922

1.4 Emergency telephone number USA: 800-368-0822

Section 2 Hazards Identification:

2.1 Classification of substance or mixture

Not classified as hazardous according to Regulation (EC) 1272/2008 (CLP/GHS) or Directive 67/548/EEC as amended.
Caution: This substance has not been fully tested (EC).

Inhalation (powder/mists):	May be harmful if inhaled. May cause upper respiratory tract & mucous membrane irritation.
Skin and Eyes:	May cause skin and eye irritation.
Ingestion:	May be harmful if swallowed.
Environmental:	May be harmful to the environment.

2.2 Label Elements

None required according to regulation (EC) 1272/2008 (CLP/GHS) or Directive 1999/45/EC

Section 3 Composition Information on Ingredients:

3.1 Refers to content in aqueous solution:

Name	CAS Number	EC Number	Regulation (EC) 1272/2008 Hazard class, categ. Code, & hazard statements	Directive 67/548/EEC Class & R phrases	Percent (w/w) approx.
Water	7732-18-5	231-791-2	Not hazardous	Not hazardous	97.85%
Polystyrene Beads	9003-53-6	500-008-9	Not hazardous	Not hazardous	≥0.85%
Sodium Chloride, NaCl	7647-14-5	231-598-3	No Data	No Data	0.8%
Sodium Phosphate, Dibasic, Na ₂ HPO ₄	7558-79-4	231-448-7	No Data	No Data	0.2%

Sodium Phosphate, Monobasic Monohydrate, NaH ₂ PO ₄ .H ₂ O	10049-21-5	231-449-2	No Data	No Data	0.03%
Potassium Chloride, KCl	7447-40-7	231-211-8	No Data	No Data	0.04%
Chromium Dioxide (CrO ₂)	12018-01-8	234-630-4	H319	Unknown	≤0.15%
Sodium Azide	26628-22-8	247-852-1	Acute Tox. 2 H300 H310 H330; Aquatic Acute 1 H400; Aquatic Chronic 1 H410	T+; R28 R32 N; R50-53	0.02%
Bovine Serum Albumin	9048-46-8	232-936-2	No data	No data	0.05%
Streptavidin or antibody coating	No Data	No Data	No Data	No Data	≤0.01%

Section 4 Emergency First Aid Procedures:

Inhalation: Immediate fresh air & rest. Keep under observation and if breathing becomes difficult seek immediate medical attention. Resuscitate if breathing stops.

Skin Contact: Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.

Eye Contact: First rinse with plenty of water for at least 10 minutes (remove contact lenses if easily possible), ensure lids remain open during flushing, and then seek immediate medical attention.

If Swallowed: Rinse mouth with water, but do not swallow mouthwash. Do not induce vomiting. Give plenty of water to drink (ONLY IN CONSCIOUS PERSONS). Refer for medical attention.

Section 5 Fire-Fighting Measures:

Main Hazard: Forms combustible solid if allowed drying out. Emits corrosive & toxic fumes, including oxides of carbon, & nitrogen during combustion.

Extinguishing Method: Use foam extinguishers or water spray.

Special Fire Fighting Procedure: Wear self-contained breathing apparatus with full face shield operated in positive pressure mode, MSHA/NIOSH (approved or equivalent), and full protective gear.

Unusual Fire Hazards and Explosion Hazards: May produce black acrid smoke if burned.

Section 6 Accidental Release Measures:

General Information: Use protective equipment as detailed in section 8.

Spill/Leaks: Clean up spills using an absorbent, inert, non-combustible material and gather up placing in a clean closed container for disposal. Do not wash away into sewers. Dispose according to local regulations.

Section 7 Handling and Storage:

Read the Suppliers' technical data Sheet carefully before commissioning or using the product. Store unopened package at ambient temperature in a well-ventilated place away from heat.

Conditions for safe storage, including any incompatibilities

Store according to the instructions in the product labeling.
Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).

Specific end uses No further relevant information available.

Section 8 Exposure Controls/ Personal Protection:

Components with workplace control parameters

No components above the 0.1% threshold have specific workplace control parameters assigned to our knowledge.

Exposure limits regionally for Sodium Azide, CAS# 26628-22-8

US OSHA	None established
ACGIH	0.29 mg/m ³ Ceiling (as Sodium azide); 0.11 ppm Ceiling (as Hydrazoic acid vapor)
ACGIH BEI	None established
DFG MAK	0.4 mg/m ³ Peak (inhalable fraction); 0.2 mg/m ³ TWA MAK (inhalable fraction)
Ireland	0.1 mg/m ³ TWA; 0.3 mg/m ³ STEL; Potential for cutaneous absorption
IOELVs	Possibility of significant uptake through the skin; 0.1 mg/m ³ TWA; 0.3 mg/m ³ STEL
NIOSH	None established
China	0.3 mg/m ³ Ceiling MAC
Croatia	Skin Notation; 0.1 mg/m ³ TWA [GVI]; 0.3 mg/m ³ STEL [KGVI]
Japan	None established
Sweden (AFS 2015:7 and amendments)	0.1 mg/m ³ TLV; 0.3 mg/m ³ Binding STEL Bindande KGV
Turkey	0.3 mg/m ³ STEL; Skin notation; 0.1 mg/m ³ TWA

Local mechanical ventilation not required as supplied, but this is also dependent on other mobile phases and analytes used. Always use a fume cupboard if handling as the dry power or where the liquid component may become airborne.

Personal Protective Equipment

Respiratory protection: If required to control exposure, use only suitable respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand Protection: Suitable impervious gloves e.g. Nitrile or Neoprene rubber. The selected protective gloves have to conform to EN 374.

Eye Protection: Safety glasses with side-shields conforming to EN 166.

Hygiene measures: Avoid contact of contents with skin, eyes, and clothing. Wash hand before breaks and immediately after handling the product.

Section 9 Physical and Chemical Properties:

Physical State:	Dilute suspension of Ferromagnetic Particles coated with Streptavidin or antibody in PBS with 0.02% Sodium Azide as preservative.
Color:	Dark Brown.
Order:	No information available.
Order Threshold:	No information available.
pH:	No information available.
Vapor Pressure:	No information available.
Vapor Density:	No information available.
Viscosity:	No information available.
Boiling Point:	100°C / 212°F
Melting Point:	No information available.
Decomposition temperature °C:	No information available.
Flash Point:	Not applicable.
Evaporation Rate:	No information available.
Specific Gravity:	No information available.
Solubility:	No information available.
Log Pow:	No data available.

Section 10 Stability and Reactivity:

Reactivity:	No further relevant information available
Chemical Stability:	The product is stable in accordance with the recommended storage conditions.
Possibility of hazardous Reactions:	Sodium azide forms explosive compounds with heavy metals. Repeated contact at low concentrations of azide with lead and copper commonly found in plumbing drains may result in the buildup of shock sensitive compounds.
Conditions to avoid:	Extreme heat and incompatible materials.

Incompatible Materials:	Metals and metallic compounds.
Materials to avoid:	Strong oxidizing agents, bases.
Hazardous Decomposition:	No decomposition products posing significant hazards would be expected from this product (an aqueous solution).
Hazardous Polymerization:	Will not occur.

Section 11 Toxicological Data:

Caution: To the best of our knowledge, the toxicological properties of these materials have not been fully investigated. Sodium azide is known to be highly toxic.

Acute effects: Sodium azide may result in eye and skin irritation. Ingestion may result nausea headache and vomiting.

Chronic effects: Sodium azide can cause cancer, or alter genetic material. Target organs include heart, nerves, brain

11.1 Toxicity data for hazardous ingredients:

Sodium azide CAS# 26628-22-8 Dermal LD50 Rabbit 20 mg/kg (NLM_HSDB); Inhalation LC50 Rat 0.054 – 0.52 mg/L 4 h (dust)(ECHA_API); Oral LD50 Rat 27 mg/kg (NZ_CCID)

Primary routes of exposure:	Eye contact, ingestion, inhalation, and skin contact
Acute toxicity:	Not classified based on available data
Skin corrosion/irritation:	Not classified based on available data
Serious eye damage/irritation:	Not classified based on available data
Respiratory or skin:	Not classified based on available data
Germ cell mutagenicity:	Not classified based on available data
Carcinogenicity:	No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP, OSHA or 1272/2008 EC regulation
Reproductive toxicity:	Not classified based on available data
Specific target organ toxicity (STOT) – Single exposure:	Not classified based on available data
Specific target organ toxicity (STOT) –Repeated exposure:	Not classified based on available data
Aspiration hazard:	Not classified based on available data

11.2 Information on other hazards

Endocrine disrupting properties	This product does not have substances(s) of endocrine disrupting properties for health according to REACH Article 57(f).
Other information	No further relevant information available.

Section 12 Ecological Information:

12.1 Toxicity for Sodium azide CAS# 26628-22-8

Fresh water species:	LC50 96 h Oncorhynchus mykiss: 0.8 mg/L; LC50 96 h Lepomis macrochirus: 0.7 mg/L; LC50 96 h Pimpephales promelas: 5.46 mg/L [flow-through]
Microtox/organisms:	No information available.
Water flea:	No information available.
Fresh water algae:	No information available.
Persistence and degradability:	Not determined for the product.
Bioaccumulative potential:	Not determined for the product.
Mobility in soil:	Not determined for the product.
Results of PBT & vPvB assessment:	Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

Endocrine disrupting properties: This product does not have substance(s) of endocrine disrupting properties for environment according to REACH Article 57(f).

Other adverse effects: This product environmentally hazardous substance below the cutoff level. Refer section 3 for ingredient information. Do not allow undiluted product to enter sewer/surface or ground water.

Section 13 Disposal Considerations:

13.1 Waste treatment methods

Product waste disposal:

Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

Sodium azide preservative may form explosive compounds in metal drain lines. See NIOSH Bulletin: Explosive Azide Hazard (8/16/76). To avoid the possible buildup of azide compounds, flush waterpipes with water after the disposal of undiluted reagent. Sodium azide disposal must be in accordance with appropriate local regulations.

Additional information:

Suggested European waste catalogue 18 01 07 – chemicals other than those mentioned in 18 01 06. Dispose in accordance with national, state, and local waste regulations.

Methods of disposal must meet all local, federal and state laws.

Section 14 Transportation Information:

Transportation of this product is not regulated under ICAO, IATA DGR, IMDG, USDOT, European ADR and RID or Canadian TDG.

UN/ID number:	Not regulated for transportation
UN proper shipping name:	Not regulated for transportation
Transport hazard class(es):	Not regulated for transportation
Packing group:	Not regulated for transportation
Environmental hazards:	Not regulated for transportation
Special precautions for user:	None
Maritime transport in bulk according to IMO instruments:	Not applicable.

Section 15 Regulatory Information:

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1 US Federal and State Regulations

SARA 313 (Section 313, Title III reporting requirements)

CAS # 26628-22-8 Sodium Azide 1.0% de minimis concentration

15.2 EU Regulations

This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.

REACH 1907/2006 EC – Annex XVII – Restrictions on Certain Dangerous Substances. Microplastic information: Use restricted entry 78. For the purpose of entry 78, the use of Synthetic Microplastics (SPM) for product and process orientated research & development is overall derogated.

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors – Substances Subject to Suspicious Transactions Reporting

No ingredients listed.

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors – Restricted Explosives Precursors

No ingredients listed.

REACH 1907/2006 EC – Candidate List of Substance of Very High Concern (SVHC)

Not applicable.

REACH 1907/2006 EC – Annex XVII – Restrictions on Certain Dangerous Substances

No ingredients listed.

REACH 1907/2006 EC – Annex XIV – List of Substances subject to authorization

Not applicable. Refer to Section 3



Section 16 Other Information:

16.1 Text of hazard categ. Codes, hazard statements, and R-phase(s) mentioned in Section 2:

Acute Tox 5. Acute toxicity category 5

H303 May be harmful if swallowed.

H316 Causes mild skin irritation.

H333 May be harmful if inhaled.

16.2 Further Information:

This SDS was prepared in accordance with ANSI Z400.1-1993, 91/155/EEC & EC 1907/2006 recommended formats.

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