HoppeSyler Scientific

HoppeSyler Scientific Inc.
79 Bessemer Road, Unit 1
London, ON N6E 1P9 · Canada
info@hoppesyler.com
+1 833 727 7522
www.hoppesyler.com

SAFETY DATA SHEET

ECF Buffer

Prepared under WHMIS (Hazardous Products Regulations, SOR/2015-17) / GHS Rev. 7.

DOCUMENT ID	VERSION	ISSUED	EFFECTIVE
HSS-BF07-SDS	1.0	2026-11-14	2026-11-14

1 Identification

Product name	ECF Buffer (HoppeSyler ECF Buffer, Electro-Cell Fusion Buffer, Sterile)
Product type	Electro-cell fusion buffer: a sterile, low-conductivity aqueous solution of D-mannitol containing a stabilising protein and trace salts.
Catalogue number	MBECF-100 (100 mL) · MBECF-P100 (pack of 5 × 100 mL)
Recommended use	Laboratory reagent: a low-conductivity medium for the electro-cell fusion of mammalian cells. For laboratory research use only (RUO).
Restrictions on use	Not for food, drug, pesticide, or biological-product use. Not for human or animal diagnostic or therapeutic use.
Supplier	HoppeSyler Scientific Inc., 79 Bessemer Road, Unit 1, London, ON N6E 1P9, Canada
Origin	Manufactured in Canada.
Emergency telephone	1-833-727-7522 · Email: info@hoppesyler.com

2 Hazard Identification

WHMIS / GHS classification	**Not classified.** The product does not meet the criteria for any physical, health, or environmental hazard class under the Hazardous Products Regulations (SOR/2015-17).
Basis for non-classification	The product is a dilute aqueous solution of a sugar alcohol with a stabilising protein and trace salts; no constituent is present at a concentration that classifies the product.
Signal word	None.
Pictograms	None.
Hazard statements	None.
Precautionary statements	None required by the classification. Handling and personal protection for laboratory use are given in Sections 7 and 8.
Other hazards	No hazard is known that is not otherwise classified. As with any laboratory reagent, avoid unnecessary skin and eye contact and do not ingest.

3 Composition / Information on Ingredients

Substance type: mixture (aqueous solution of a sugar alcohol).

Component	CAS-No	Concentration (w/w)
Water (nuclease-free)	7732-18-5	80-100%*
D-Mannitol	69-65-8	3-7%*

* The actual concentration is withheld as a trade secret.

The remaining constituents are proprietary. They are trace salts and a stabilising protein, and each of them is below every classification cut-off in the finished product, on its own and under the mixture rules, and none carries a carcinogen, germ-cell mutagen or reproductive-toxicant classification. No component carries a sensitiser classification.

4 First-Aid Measures

Eye contact	Rinse cautiously with water for several minutes, holding the eyelids open. Remove contact lenses if present and easy to do, then continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash with soap and water. Get medical attention if irritation develops and persists.
Inhalation	Not an expected route of exposure for this non-volatile aqueous liquid. Remove the person to fresh air if any discomfort occurs.

Ingestion	Rinse mouth with water. Do not induce vomiting. Get medical attention if a large amount is swallowed or if symptoms occur.
Symptoms / effects	None expected under normal handling. The product is a near-neutral aqueous solution.
Note to physician	Treat symptomatically.

5 Fire-Fighting Measures

Suitable media	Water spray, water fog, dry chemical, carbon dioxide (CO_2), or alcohol-resistant foam. Use media appropriate to the surrounding fire.
Unsuitable media	None known.
Specific hazards	Not a flammable liquid: an aqueous solution with no flammable solvent and no flash point (Section 9). The product as supplied does not support combustion. Thermal decomposition of the dried residue may release carbon oxides, nitrogen oxides, sulfur oxides, hydrogen chloride and metal oxides.
Firefighter PPE	Self-contained breathing apparatus (SCBA) and full protective gear for any surrounding fire.

6 Accidental Release Measures

Personal precautions	Wear protective gloves and eye protection. No special emergency measures are required for this unclassified aqueous reagent.
Environmental	No special environmental precautions are required; see Section 12.
Containment / cleanup	Absorb the spill with paper towel or an inert absorbent. Wipe up, then rinse the area with water. Place waste in a labelled container for disposal in accordance with Section 13.

7 Handling and Storage

Safe handling	Handle in accordance with good laboratory practice. Wear the protective equipment given in Section 8 and wash hands after handling. Keep the container closed when not in use to maintain sterility.
Safe storage	Store at 4 °C in the closed original container. Do not use if the solution is cloudy or if visible growth is present.
Incompatibilities	Strong oxidising agents.

8 Exposure Controls / Personal Protection

Exposure limits	Neither disclosed constituent is listed in Ontario Regulation 833 or in United States OSHA Table Z-1, and no ACGIH threshold limit value is known for either. The remaining constituents are present at trace levels in an aqueous liquid that is dispensed in small volumes and does not generate a dust, mist or vapour in normal use. *Occupational exposure limits checked against the ACGIH threshold limit value list, United States OSHA 29 CFR 1910.1000 Table Z-1, and Ontario Regulation 833.*
Engineering controls	General laboratory ventilation is sufficient. No special engineering controls are required.
Eye / face protection	Safety glasses meeting CSA Z94.3.
Skin protection	Disposable nitrile gloves and a laboratory coat.
Respiratory protection	Not required under normal handling of this aqueous liquid.

9 Physical and Chemical Properties

Physical state	Liquid	**Decomposition temperature**	No data available
Colour	Colourless, clear	**pH**	7.2 ± 0.2 (lot release specification)
Odour	No data available	**Kinematic viscosity**	No data available (water-like)
Melting point / freezing point	About 0 °C (dilute aqueous solution; not measured)	**Solubility**	Miscible with water
Boiling point / range	About 100 °C (dilute aqueous solution; not measured)	**Partition coefficient (n-octanol/water, log K_{ow})**	Not applicable (aqueous solution)
Flammability	Not flammable	**Vapour pressure**	No data available
Explosion / flammability limits	Not applicable (not flammable)	**Density / relative density**	Approximately 1.0 (dilute aqueous solution; not measured)
Flash point	Not applicable (aqueous solution with no flammable solvent)	**Relative vapour density**	No data available
Auto-ignition temperature	Not applicable (not flammable)	**Particle characteristics**	Not applicable (liquid)

Values marked not measured are estimates, not test results; properties for which no value is available are stated as no data available.

10 Stability and Reactivity

Reactivity / stability	Stable under the recommended storage and handling conditions. No hazardous polymerisation. No hazardous reactions known.
Conditions to avoid	Storage above the recommended temperature, and prolonged storage after opening, which risks loss of sterility. Neither is a safety hazard.
Incompatible materials	Strong oxidising agents.
Decomposition products	Thermal decomposition of the dried residue may yield carbon oxides, nitrogen oxides, sulfur oxides, hydrogen chloride and metal oxides.

11 Toxicological Information

Likely routes of exposure	Eye and skin contact during pipetting are the only realistic routes. Ingestion is unlikely, and inhalation is not an expected route for this non-volatile aqueous liquid.
Acute toxicity	Not classified. No toxicity data exist for the mixture itself; the assessment is by calculation from the components. No component carries an acute-toxicity classification.
Skin corrosion / irritation	Not classified. A near-neutral aqueous solution is not expected to irritate intact skin.
Serious eye damage / irritation	Not classified. Transient mild irritation may occur with direct contact.
Respiratory / skin sensitisation	Not classified. No component of the product carries a sensitiser classification.
Specific target organ toxicity (single and repeated exposure)	Not classified.
Aspiration hazard	Not classified.
Carcinogenicity, mutagenicity, reproductive toxicity	Not classified. No component carries a carcinogen, germ-cell mutagen or reproductive-toxicant classification.
Component data	Neither disclosed component carries a hazard classification of its own.

12 Ecological Information

Ecotoxicity	Not classified as hazardous to the aquatic environment. No component carries an aquatic classification.
Persistence and degradability	No data available for the mixture.
Bioaccumulative potential	Low.
Mobility in soil	Highly mobile in soil and water, being miscible with water.
Other adverse effects	None known.

13 Disposal Considerations

Dispose of contents and container in accordance with local, provincial and federal regulations. The product is not classified as a hazardous waste on the basis of its composition; users must still verify their own waste characterisation and any institutional requirements.

14 Transport Information

TDG (Canada)	**Not regulated.** The product carries no hazard classification in Section 2 and meets no transport hazard class under the Transportation of Dangerous Goods Regulations (SOR/2001-286). No UN number or packing group applies.

15 Regulatory Information

Canada (WHMIS)	Not classified under the Hazardous Products Regulations (SOR/2015-17). Every component of the product is listed on the Canadian Domestic Substances List (DSL).
Other jurisdictions	United States (TSCA): contact HoppeSyler Scientific for inventory compliance status. No component is listed under California Proposition 65.

16 Other Information

Prepared by	HoppeSyler Scientific Inc. · Approved by: HoppeSyler Scientific Inc.
Version	1.0
Revision date	2026-11-14

Legend	GHS = Globally Harmonized System of Classification and Labelling of Chemicals; WHMIS = Workplace Hazardous Materials Information System; HPR = Hazardous Products Regulations; TDG = Transportation of Dangerous Goods; DSL = Domestic Substances List; TSCA = Toxic Substances Control Act; OSHA = Occupational Safety and Health Administration; ACGIH = American Conference of Governmental Industrial Hygienists; CSA = Canadian Standards Association; RUO = Research Use Only; ECF = electro-cell fusion.

Disclaimer. The information herein is provided in good faith and believed accurate as of the effective date. It is the user's responsibility to determine suitability for their purpose. HoppeSyler Scientific Inc. makes no warranty and assumes no liability for use of this information.

END OF SAFETY DATA SHEET