

MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

1. Chemical Product and Company Identification

Description: Standard Internal Fill Solution 1
Product Code: SIFS-1
Product Type: Aqueous buffered salt solution
Application: pH Electrodes

Manufacturer/Supplier Information

MSDS prepared by:
Innovative Sensors, Inc.
4745 E. Bryson Street
Anaheim, California 92807

For additional health, safety or regulatory information, call (714) 779-8781

2. Composition, Information on Ingredients

No exposure limits have been established for the filling solution as a whole. It is presumed to present the same health hazards as do the following components in the liquid mixture. The actual mixture, including exact weight percent information is considered a trade secret.

2.1 Chemical Content

| <i>Chemical</i> | <i>CAS No.</i> | <i>% w/v</i> |
|---------------------|----------------|--------------|
| Glycerol | 0056-81-5 | 50 |
| Potassium Chloride | 74447-40-7 | 20 |
| Potassium Phosphate | 7778-77-0 | 1.6 |
| Sodium Phosphate | 7588-79-4 | 0.3 |
| Silver Chloride | 7783-90-6 | <1.0 |
| Water | 7732-18-5 | Balance |

3. Hazards Identification

3.1 General

Appearance: Clear, colorless, odorless liquid.

3.2 Immediate Potential Health Effects

Applicable: All under §2.1
Ingestion: Strong salt taste. May cause vomiting, gastroenteritis, and/or diarrhea.
Inhalation: Irritating to mucous membranes.
Skin: May cause irritation on prolonged or repeated contact.
Eyes: May cause irritation on prolonged or repeated contact.

3.3 Delayed Health Hazards

Not established.

4. First Aid Measures

Ingestion: Drink milk or water. Induce vomiting if conscious. Consult a medical professional.
Inhalation: Move to area of fresh air. If irritation persists consult a medical professional.
Skin: Wash with soap and water.
Eyes: Immediately flush eyes with large quantities of water. Contact physician if irritation persists.

5. Fire Fighting Procedures

Not applicable. Compound cannot be ignited, will not burn.

6. Accidental Release Procedures

Soak up and remove to chemical disposal area that drains to sewage/water treatment facility.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. Avoid unnecessary exposure; remove material from eyes, skin and clothing. Wash hands thoroughly after handling. Avoid prolonged contact with skin and eyes.

7.2 Storage

Keep container closed. Store in a cool, dry place away from direct sunlight. Recommended temperature: Below 77°F (25°C).

8. Exposure Controls & Personnel Protection

8.1 Exposure Controls

If solution is accidentally over-heated or misted to induce vaporization, sufficient ventilation in volume and air flow patterns should be provided to reduce air contamination.

8.2 Personnel Protection

Respirators are not needed when using this material under normal, ambient conditions. Impervious gloves should be worn as required to prevent skin contact. Eye goggles should be worn as required to prevent eye contact.

8.3 Exposure Guidelines

No toxicity hazards known to ISI. For exposure limits refer to MSDS for individual components.

9. Physical and Chemical Properties

| | |
|----------------------|------------------------------------|
| Appearance: | Clear, colorless, odorless liquid. |
| Specific gravity: | 1.0 |
| Solubility in water: | Miscible |

| | |
|---------------------------------------|-----------------|
| Vapor pressure, mmHg at 20EC: | Not established |
| Evaporation rate (butyl acetate = 1): | Not established |
| Boiling point, 760 mmHg: | 110 C |

10. Stability and Reactivity

10.1 Stability

Stable under normal, ambient conditions.

10.2 Reactivity

Same as water.

10.3 Decomposition Products:

Total evaporation of compound and ignition of solid residues to decomposition will emit nitrogen oxides and metal oxide fumes.

11. Toxicological Information

| | |
|------------------|--------------------------------|
| Ingestion: | Moderately toxic. |
| Inhalation: | None established. |
| Skin absorption: | None established. |
| Skin: | Poison by subcutaneous routes. |
| Eyes: | None established. |

12. Ecological Information

No data for ecotoxicity has been established or found. Effects are expected to be minimal.

13. Disposal Considerations

Dispose of according to local, state/provincial and federal requirements.

14. Transportation Information

14.1 U.S. Department of Transportation (DOT)

Not regulated.

14.2 International Transportation of Dangerous Goods

Not determined.

15. Regulatory Information (Selected)

15.1 OSHA Hazard Communication Standard 29CFR1910.1200

This material presents possible health hazards as defined by these standards.

15.2 SARA Title III:313 and 40CFR372

Product does not contain any toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C - Supplier notification Requirement of 40CFR372.

15.3 TSCA Section 8(b) Inventory

ISI relies on the MSDS and certifications of compliance from our suppliers for chemical substances not manufactured by ISI.

16. Other

16.1 User's Responsibility

The OSHA Hazard Communication standard 29CFR1910.1200 requires that the information contained on these sheets be made available to your workers. Instruct your workers to handle this product properly.

16.2 Disclaimer

This Material Safety Data Sheet conforms to the OSHA Hazard Communication standard 29CFR1910.1200. The above information pertains to this product as currently formulated and is based on the information available at this time. The information contained should be used for health and safety training and not for specification purposes. Modifications to this product may substantially alter the composition and hazards of this product. Since conditions of use are outside ISI's control, ISI makes no warranties, express or implied, and assumes no liability in connection with any use of this information.

16.3 Revision

| | |
|--------------------------|------------|
| Date of latest revision: | 11/8/02 |
| Responsibility for MSDS: | S.K. Wells |

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