




Safety Data Sheet (SDS)

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA
 According to Regulation (EC) No 1907/2006 (REACH)

1. Product and Company Identification

Product(s)	SwiftFISH Hybridization Buffer
Related Product Kit	N/A
Intended Use & Restrictions	SwiftFISH Hybridization Buffer is used in Fluorescence In Situ Hybridization (FISH).
Company Information	Empire Genomics Corp. 3370 Walden Ave, Suite 114 Depew, NY 14043 United States Tel: +1 716 856 3873 (9AM–5PM, EST, Mon-Fri) Fax: +1 716 431 3440 Web: www.empiregenomics.com
Emergency Contact	+1 716 856 3873

2. Hazards Identification

Emergency Overview	Harmful solution containing formamide and 1,3-propylene sulfite; may be toxic. Avoid contact with eyes and skin. Wear gloves, lab coat, and eye protection.
OSHA Hazards	Target Organ Effect, Irritant, Teratogen, Reproductive hazard, Mutagen Target Organs: Blood, Respiratory system
GHS Classification	
Signal words, Symbol, Hazard & Precautionary Statements	  

Danger

Carcinogenicity (Category 2)
 Reproductive toxicity (Category 1B)
 Specific target organ toxicity - repeated exposure, Oral (Category 2), Blood

Hazard statement(s)
 H227 Combustible liquid.
 H351 Suspected of causing cancer.
 H360 May damage fertility or the unborn child.
 H373 May cause damage to organs (Blood) through prolonged or repeated exposure if swallowed.

Precautionary statement(s)
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 P271 Use only outdoors or in a well-ventilated area.

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P281 Use personal protective equipment as required.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant

Potential Health Effects

- Skin Contact** Formamide and 1,3-Propylene sulfite: May be harmful if exposed to skin. Cause skin irritation. May cause itching, redness or inflammation.
- Eye Contact** Formamide and 1,3-Propylene sulfite: May be harmful if exposed to eyes. Causes eye irritation. May cause watering eyes, stinging or burning sensation.
- Inhalation** Formamide and 1,3-Propylene sulfite: May be harmful if inhaled. Causes respiratory tract irritation. May cause headache, dizziness, nausea or coughing.
- Ingestion** Formamide and 1,3-Propylene sulfite: May be harmful if swallowed. May cause irritation of gastrointestinal tract, nausea, or vomiting.

See Section 11: Toxicological Information for additional information.

Environmental Effects Formamide: Toxic to aquatic life.
See Section 12: Ecological Information for additional information.
1,3-Propylene sulfite: None identified

3. Composition / Information on Ingredients

Chemical Name	Synonyms	% Composition	CAS Number
Formamide	Formic Acid	25%	75-12-7
Dextran Sulfate	Dextran Sodium Sulfate	10%	9011-18-1
1,3-Propylene sulfite	1,3,2-Dioxathiane 2-oxide Trimethylene Sulfite	12.6%	4176-55-0

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Note: It has been determined that the remaining ingredients of this product are not classified as hazardous according to the Federal OSHA Hazardous Communication Standard (29 CFR 1910.1200) or the Globally Harmonized System of Classification and Labeling of Chemicals.

4. First Aid Measures

- General Advice** Avoid further exposure to product. Consult a physician.
- In case of skin contact** Wash exposed area with soap and plenty of water. Remove any contaminated clothing. Seek medical attention.
- In case of eye contact** Wash eyes with plenty of water for at least 15 minutes. Have victim remove contact lenses. Be sure to wash under eyelids. Seek medical attention.
- If inhaled** Remove victim to well-ventilated area. If victim is not breathing, give artificial respiration. Seek medical attention.
- If swallowed** Do NOT induce vomiting. If victim is conscious, rinse mouth with water. Do not give anything to an unconscious victim. Seek medical attention.

5. Fire Fighting Measures

- Suitable Extinguishing Media** Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Use extinguisher media appropriate for surrounding fire.
- Special Protective Equipment for Firefighters** Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin
- Special Exposure Hazards** Carbon oxides, Sulphur oxides. Avoid inhalation of fumes, which may be toxic or irritating.

6. Accidental Release Measures

- Personal Precautions** Use of personal protective equipment is recommended as described in Section 8. Isolate hazard area and deny entry to unprotected personnel. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental Precautions** Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways.
- Methods for containment and clean up** Small spills may be contained and cleaned up with paper towels or absorbent pads. Absorb large spills with sand or vermiculite and place in a closed container for waste disposal. Avoid physical contact during removal.

7. Handling and Storage

- Precautions for Safe Handling** Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of vapour or mist. Wash hands thoroughly after use. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.
- Conditions for Safe Storage** Keep container tightly closed. Keep container in a cool, well-ventilated area, and away from light. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not expose to excessive heat. Store away from oxidizers.

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8. Exposure Controls / Personal Protection

Permissible Exposure Limits USA ACGIH Threshold Limit Values (Formamide): TWA 10 ppm
USA NIOSH Recommended Exposure Limits (Formamide): TWA 10 ppm, 15 mg/m³

Engineering Controls No special controls needed.

Personal Protective Equipment

Eye Protection Wear chemical splash goggles and face shield when eye and face contact is possible due to splashing or spraying of material.

Skin Protection Use chemically resistant gloves and a lab coat with sleeves.

Respiratory Protection Exceeding exposure limits is unlikely during normal usage. However, if irritating vapors are produced, respiratory protection is recommended. Attempt to reduce exposure levels to an acceptable range.

General Hygiene Measures Avoid contact with eyes, skin and clothing. Wash hands thoroughly after handling and before eating or drinking.

9. Physical and Chemical Properties

Appearance Cloudy solution.

Odor None

pH (as supplied) No data available

Melting point No data available

Boiling point No data available

Flash point No data available

Flammability No data available

Lower explosion limit No data available

Upper explosion limit No data available

Vapor pressure No data available

Vapor density No data available

Specific gravity No data available

Solubility (in water) Soluble

Partition coefficient No data available
(n-octanol/water)

Auto-ignition temperature No data available

Decomposition Temperature No data available

10. Stability and Reactivity

Chemical Stability Stable under recommended storage conditions (see Section 7).

Conditions to avoid Direct light. Heat, flames and sparks. Keep away from incompatible materials.

Materials to avoid Direct light. Heat, flames and sparks. Keep away from incompatible materials.

Hazardous decomposition products Hazardous decomposition products formed under fire conditions: carbon monoxide, carbon dioxide, nitrogen oxides. Sulphur oxides

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Possibility of hazardous reactions None identified.

11. Toxicological Information

Acute dose effects Formamide:
LD50 Oral – rat – 5325 mg/kg
LC50 Inhalation – rat – 4h – 21 mg/L
LD50 Dermal – rat – >3000 mg/kg

Dextran Sulfate :
LD50 Oral- Mouse -25200 mg/kg
LD50 Oral –Rat- 20600 mg/kg
LD50 Intravenous -Rat -473 mg/kg

1,3-Propylene sulfite:
No data available

Repeat dose effects No data available

Skin irritation No data available

Skin and respiratory sensitization Formamide: Did not cause sensitization on laboratory animals
1,3-Propylene sulfite: No data available

Eye irritation Formamide: Eyes – rabbit – Mild eye irritation 1,3- Propylene sulfite: No data available

Carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, potential, known, anticipated, or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.

Mutagenicity Formamide: in vivo tests showed mutagenic effects
1,3-Propylene sulfite: No data available

Reproductive effects Formamide: Reproductive toxicity – rat – oral; may cause reproductive disorders.
1,3-Propylene sulfite: No data available

Developmental effects Formamide: Developmental toxicity – rat – skin; may cause congenital malformation in the fetus, presumed human reproductive toxicant
1,3-Propylene sulfite: No data available

Target organ effects Formamide: Developmental toxicity – rat – skin; may cause congenital malformation in the fetus, presumed human reproductive toxicant
1,3-Propylene sulfite: No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated at product concentrations.

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12. Ecological Information

Ecotoxicity	Formamide: Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 6569 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h Toxicity to algae - Desmodesmus subspicatus (green algae) – statis test EC50 >500 mg/l - 72 h Toxicity to bacteria - Respiration inhibition EC50 - Sludge Treatment - > 1,000 mg/l - 30 min 1,3-Propylene sulfite:No data available
Persistence and degradability	Formamide: aerobic - Exposure time 28 d Result: 99 % - Readily biodegradable 1,3-Propylene sulfite:No data available
Bioaccumulation/accumulation	No data available
Mobility in environmental media	No data available
Other hazardous effects	No data available

13. Disposal Considerations

Product	Disposal should be in accordance with applicable national, state, and local laws and regulations. Local regulations may be more stringent than national or state requirements. Verify local and state regulations before discharging into public sewers or landfills. Do not dump into any body
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of water. Contact a licensed professional waste disposal service for appropriate methods of disposal.

Contaminated packaging Dispose of as unused product.

14. Transportation Information

Proper shipping name Not applicable

Technical name Not applicable

Hazard class Not applicable

Identification number Not applicable

Packing group Not applicable

DOT (US) Not applicable

IMDG Not applicable

IATA Not applicable

TDG Not applicable

15. Regulatory Information

Inventory Status

United States (TSCA) All ingredients are on the inventory or exempt from listing.

Canada (DSL / NDSL) All ingredients are on the inventory or exempt from listing.

SARA 302 Components No chemicals in this product are subject to reporting requirements.

SARA 313 Components No chemicals in this product are subject to reporting requirements.

SARA 311/312 Hazards Acute health hazard, Chronic health hazard

California Prop. 65 components This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Sources and Suitability The above information was obtained from sources available at the time of revision and believed to be accurate and reliable. The information included is not intended to be all inclusive and should only be used as a guide. Empire shall not be held liable for any damage resulting from use, handling, or contact with the above product.