



Safety Data Sheet

Product Name: Histidine-tagged Protein Purification Resin

Reviewed on: 21 September 2012

1. Identification of Substance:

- **GHS Product identifier:** Histidine-tagged Protein Purification Resin
- **Other means of identification:** Catalog Number: IP999
- **Application of the substance / the preparation:** N/A
- **Manufacturer/Supplier:**
R&D Systems Inc.
614 McKinley Place N.E.
Minneapolis, MN 55413 USA
- **For product related questions call:** 1-800-343-7475. In Europe call: +44(0)1235-529449.
- **Emergency information:** In case of a chemical emergency, spill, leak, fire, or accident call **CHEMTREC** at 1-800-424-9300 (US or Canada). Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

2. Hazards Identification:

- **Classification: Regulation (EC) No 1272/2008 [EU-GHS/CLP]:** Ethanol Solution 20%

Flammable Liquid, 2



Signal Word: DANGER

- **Hazard Statements:** H225: Highly flammable liquid and vapour.
- **Precautionary Statements:** P210: Keep away from heat/sparks/ open flames/hot surfaces. No smoking. P233: Keep container tightly closed. P241: Use explosion-proof electrical equipment. P242: Use only non-sparking tools. P243: Take precautionary measure against static discharge. P280: Wear protective gloves/protective clothing/eye protection/face protection.
- **Responses:**
IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.
IN CASE OF FIRE: Use alcohol resistant foam, carbon dioxide, or dry chemical to extinguish.
- **Classification according to EU Directives 67/548/EEC or 1999/45/EC:** F: Highly Flammable.
- **R-phrases:** R11: Highly flammable.
- **S-phrases:** S1/2: Keep out of reach of children. S7: Keep container tightly closed. S16: Keep away from sources of ignition-No smoking.
- **Special Hazards:** none.

3. Information on Ingredients:

- **Description:** Ethanol Solution

Contains	CAS No.	EC-No.	Index-No.	Content
Ethanol	64-17-5	200-578-6	603-002-00-5	20%

4. First Aid Measures:

- **After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **After skin contact:** Wash off with soap and plenty of water. Take victim immediately to a hospital. Consult a physician.
- **After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this MSDS.
- **After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.



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- **Most important symptoms and effects, both acute and delayed:** Unknown
- **Indication of any immediate medical attention and special treatment needed:** No data available

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Do not extinguish fire unless flow can be stopped. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible.
- **Special hazards arising from the substance or mixture:** Emits toxic fumes under fire conditions. Carbon oxides.
- **Protective equipment:** Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- **Further information:** Use water spray to cool unopened containers.

6. Accidental Release Measures:

- **Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate all personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- **Environmental precautions:** Prevent further leakage or spillage is safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Methods and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

7. Handling and Storage:

- **Precautions for safe handling:** Keep away from sources of ignition – No Smoking. Take measures to prevent the buildup of electrostatic charge.
- **Conditions for safe storage, including incompatibilities:** Store in a well ventilated place. Keep cool.

8. Exposure Controls and Personal Protection:

- **Control parameters:**
 - UK EH40 WEL Workplace Exposure Limits: TWA 1000 ppm, 1920 mg/m³.
 - NIOSH REL: TWA 1000 ppm, 1900 mg/m³.
- **Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.
 - Personal Protective Equipment:**
 - Eye and Face Protection:** Tightly fitting safety goggles. Face shield (8-inch minimum).
 - Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - Body Protection:** Complete suit protection against chemicals, flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
 - Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use full-face respirator.

9. Physical and Chemical Properties:

- **Appearance:** Liquid
- **Odor:** weak vinous odor
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** Not available.
- **Upper/lower flammability or explosive limits:** Not available
- **Vapor density :** Not available
- **Vapor pressure:** Not available
- **Relative density:** Not available
- **Boiling point/Boiling range:** at or above 100° F.



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- **Partition coefficient: noctanol/water:** Not available
- **Flash point:** Not available
- **Water solubility:** Soluble
- **Evaporation rate:** Not available

- **Auto igniting:** Not available
- **Decomposition temperature:** Not available
- **Viscosity:** Not available
- **Flammability (solid, gas):** Not available

10. Stability and Reactivity:

- **Reactivity:** Strong oxidizing agents, peroxides, acid chlorides, acid anhydrides, alkali metals, ammonia, moisture, air.
- **Chemical Stability:** Hygroscopic.
- **Possibility of hazardous reactions:** Forms explosive mixtures with air.
- **Conditions to avoid:** Heat, flames, sources of ignition.
- **Incompatible materials:** Strong oxidizers, alkalis and acids, air.
- **Hazardous decomposition products:** no data available.

11. Toxicological Information:

- **Acute toxicity:** rat oral – LD50 = 7060 mg/kg; mouse oral – LD50 = 3450 mg/kg.
- **Skin corrosion/irritation:** no data available
- **Serious eye damage/irritation:** rat inhalation – LD50 = 20,000 ppm/10 hours.
- **Respiratory or skin sensitization:** no data available
- **Germ cell mutagenicity:** no data available.
- **Carcinogenicity:** no data available.
- **Reproductive toxicity:** no data available.
- **Specific target organ toxicity (STOT) -single exposure:** eyes, skin, respiratory system, central nervous system, liver, blood reproductive system.
- **Specific target organ toxicity (STOT) -repeated exposure:** liver.
- **Aspiration hazard:** may cause respiratory irritation.
- **Information on likely routes of exposure:** ingestion, inhalation, skin and/or eye contact.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - Inhalation:** nose irritation.
 - Ingestion:** headache, drowsiness, lassitude (weakness, exhaustion), narcosis, cough, liver damage, anemia, reproductive/teratogenic effects.
 - Skin contact:** irritation and redness.
 - Eye contact:** irritation and redness.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:** acute intoxication, delayed effects on liver, blood and reproductive systems.

12. Ecological Information:

- **Ecotoxicity:** *Salmo gairdnerii* (Rainbow Trout) LD50 13,000 mg/L/ 96 hours.
- **Biodegradability:** Ethanol is a natural emission product from various plants, fermentation product and as a biological decomposition product from wastes and sewage. It exists solely in the vapor phase with a half-life of 5 days.
- **Bioaccumulative potential:** Ethanol is not expected to adsorb to suspended solids and sediments.
- **Mobility in soil:** no data available.
- **Other adverse effects:** no data available.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated packaging:** Dispose in the same manner as unused product.



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14. Transport Information:

▪ **ADR/RID ADN/ADNR IMDG IATA/DOT**

ADR/DOT/: UN Number: UN 1170
RID Proper Shipping Name: Ethanol
Hazard class: 3
Packing group: II

IATA: UN Number: UN 1170
Proper Shipping Name: Ethanol
Hazard class: 3
Packing group: II

IMDG: UN Number: UN 1170
Proper Shipping Name: Ethanol
Hazard class: 3
Packing group: II
Marine Pollutant: No

15. Regulations:

▪ **US Federal and State Regulations**

TSCA (Toxic Substances Control Act): Ethanol is listed.

SARA 313: Ethanol is not listed.

SARA 311/312 Hazards: Not listed.

CERCLA Reportable Quantity: not reportable.

California Proposition 65: Ethanol in alcoholic beverages is listed on California's listing of known or potential carcinogens.

16. Other Information:

- **R-phrases:** R11: Highly flammable.
- **S-phrases:** S1/2: Keep out of reach of children. S7: Keep container tightly closed. S16: Keep away from sources of ignition-No smoking.
- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.