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# Material Safety Data Sheet

**Code Numbers: R-Phycoerythrin - Affinity-Purified Antibodies, -Streptavidin, and -Purified Serum Proteins, freeze-dried with preservative**

| | | | | | | |
|---|---|---|---|---|---|---|
| 005-110-003 | 109-116-088 | 112-116-071 | 115-115-206 | 115-116-072 | 706-116-148 | 712-116-153 |
| 005-110-006 | 109-116-097 | 112-116-072 | 115-115-207 | 115-116-075 | 709-116-073 | 713-116-147 |
| 016-110-084 | 109-116-098 | 112-116-075 | 115-115-208 | 115-116-146 | 709-116-098 | 715-116-150 |
| 017-110-006 | 109-116-127 | 112-116-143 | 115-115-209 | 127-115-160 | 709-116-149 | 715-116-151 |
| 109-115-011 | 109-116-170 | 115-115-164 | 115-116-068 | 703-116-155 | 711-116-152 | . |
| 109-115-098 | 111-116-144 | 115-115-205 | 115-116-071 | 705-116-147 | 712-116-150 | . |

## 1. PRODUCT IDENTIFICATION

| | |
|---|---|
| 005-110-003 | R-Phycoerythrin-ChromPure Goat IgG, whole molecule |
| 005-110-006 | R-Phycoerythrin-ChromPure Goat IgG, F(ab')2 fragment |
| 016-110-084 | R-Phycoerythrin-Streptavidin |
| 017-110-006 | R-Phycoerythrin-ChromPure Donkey IgG, F(ab')2 fragment |
| 109-115-011 | R-Phycoerythrin-AffiniPure Goat Anti-Human Serum IgA, α Chain Specific |
| 109-115-098 | R-Phycoerythrin-AffiniPure Goat Anti-Human IgG, Fcγ Fragment Specific (min X Bov,Hrs,Ms Sr Prot) |
| 109-116-088 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Human IgG (H+L) (min X Bov,Hrs,Ms Sr Prot) |
| 109-116-097 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Human IgG, F(ab')2 Fragment Specific (min X Bov,Hrs,Ms Sr Prot) |
| 109-116-098 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Human IgG, Fcγ Fragment Specific (min X Bov,Hrs,Ms Sr Prot) |
| 109-116-127 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Human IgG + IgM (H+L) (min X Bov Sr Prot) |
| 109-116-170 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Human IgG, Fcγ Fragment Specific (min X Bov,Ms,Rb Sr Prot) |
| 111-116-144 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Rabbit IgG (H+L) (min X Hu,Ms,Rat Sr Prot) |
| 112-116-071 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Rat IgG, Fcγ Fragment Specific (min X Hu,Bov,Hrs Sr Prot) |
| 112-116-072 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Rat IgG, F(ab')2 Fragment Specific (min X Hu,Bov,Hrs Sr Prot) |
| 112-116-075 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Rat IgM, µ Chain Specific (min X Hu,Bov,Hrs Sr Prot) |
| 112-116-143 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Rat IgG (H+L) (min X Hu,Bov,Hrs,Rb Sr Prot) |
| 115-115-164 | R-Phycoerythrin-AffiniPure Goat Anti-Mouse IgG (subclasses1+2a+2b+3), Fcγ Fragment Specific (min X Hu,Bov,Rb Sr Prot) |
| 115-115-205 | R-Phycoerythrin-AffiniPure Goat Anti-Mouse IgG, Fcγ Subclass 1 Specific (min X Hu,Bov,Rb Sr Prot) |
| 115-115-206 | R-Phycoerythrin-AffiniPure Goat Anti-Mouse IgG, Fcγ Subclass 2a Specific (min X Hu,Bov,Rb Sr Prot) |
| 115-115-207 | R-Phycoerythrin-AffiniPure Goat Anti-Mouse IgG, Fcγ Subclass 2b Specific (min X Hu,Bov,Rb Sr Prot) |
| 115-115-208 | R-Phycoerythrin-AffiniPure Goat Anti-Mouse IgG, Fcγ Subclass 2c Specific (min X Hu,Bov,Rb Sr Prot) |
| 115-115-209 | R-Phycoerythrin-AffiniPure Goat Anti-Mouse IgG, Fcγ Subclass 3 Specific (min X Hu,Bov,Rb Sr Prot) |
| 115-116-068 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Mouse IgG + IgM (H+L) (min x Hu,Bov,Hrs Sr Prot) |
| 115-116-071 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Mouse IgG, Fcγ Fragment Specific (min X Hu,Bov,Hrs Sr Prot) |
| 115-116-072 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Mouse IgG, F(ab')2 Fragment Specific (min X Hu,Bov,Hrs Sr Prot) |
| 115-116-075 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Mouse IgM, µ Chain Specific (min X Hu,Bov,Hrs Sr Prot) |
| 115-116-146 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Goat Anti-Mouse IgG (H+L) (min X Hu,Bov,Hrs,Rb,Sw Sr Prot) |
| 127-115-160 | R-Phycoerythrin-AffiniPure Goat Anti-Armenian Hamster IgG (H+L) (min X Bov,Hu,Ms,Rb,Rat Sr Prot) |
| 703-116-155 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Chicken IgY (IgG) (H+L) (min X Bov,Gt,GP,Sy Hms,Hrs,Hu,Ms,Rb,Rat,Shp Sr Prot) |
| 705-116-147 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Goat IgG (H+L) (min X Ck,GP,Sy Hms,Hrs,Hu,Ms,Rb,Rat Sr Prot) |
| 706-116-148 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Guinea Pig IgG (H+L) (min X Bov,Ck,Gt,Sy Hms,Hrs,Hu,Ms,Rb,Rat,Shp Sr Prot) |
| 709-116-073 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Human IgM, Fc5µ Fragment Specific (min X Bov,Hrs Sr Prot) |
| 709-116-098 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Human IgG, Fcγ Fragment Specific (min X Bov,Hrs,Ms Sr Prot) |
| 709-116-149 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Human IgG (H+L) (min X Bov,Ck,Gt,GP,Sy Hms,Hrs,Ms,Rb,Rat,Shp Sr Prot) |
| 711-116-152 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Rabbit IgG (H+L) (min X Bov,Ck,Gt,GP,Sy Hms,Hrs,Hu,Ms,Rat,Shp Sr Prot) |
| 712-116-150 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Rat IgG (H+L) (min X Bov,Ck,Gt,GP,Sy Hms,Hrs,Hu,Rb,Shp Sr Prot) |
| 712-116-153 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Rat IgG (H+L) (min X Bov,Ck,Gt,GP,Sy Hms,Hrs,Hu,Ms,Rb,Shp Sr Prot) |
| 713-116-147 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Sheep IgG (H+L) (min X Ck,GP,Sy Hms,Hrs,Hu,Ms,Rb,Rat Sr Prot) |
| 715-116-150 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Mouse IgG (H+L) (min X Bov,Ck,Gt,GP,Sy Hms,Hrs,Hu,Rb,Shp Sr Prot) |
| 715-116-151 | R-Phycoerythrin-AffiniPure F(ab')2 Fragment Donkey Anti-Mouse IgG (H+L) (min X Bov,Ck,Gt,GP,Sy Hms,Hrs,Hu,Rb,Rat,Shp Sr Prot) |

## 2. COMPOSITIONS AND INFORMATION ON INGREDIENTS

| Chemical Name | CAS# | % (w/w) | Exposure Limits In Air-OSHA | | | |
|---|---|---|---|---|---|---|
| | | | PEL | STEL | IDLH | OTHER |
| Non-Hazardous, Proprietary ingredients | N/A | 56 | NE | NE | NE | NE |
| Bovine Serum Albumin | N/A | 14 | NE | NE | NE | NE |
| R-Phycoerythrin (fluorescent plant protein)-conjugated antibody (or streptavidin) | N/A | 0.6-1.9 | NE | NE | NE | NE |
| Sodium Chloride | 7647-14-5 | 14 | NE | NE | NE | NE |
| Sodium Phosphate | 7558-79-4 | 13 | NE | NE | NE | NE |
| Sodium Azide | 26628-22-8 | 0.47 | NE | NE | NE | NE |

NE=Not Established

## 3. HAZARD IDENTIFICATION

Sodium azide is a hazardous chemical, however, this product is not considered to be a hazardous substance according to the OSHA Hazard Communications Standard (CFR 1910.1200), which states that, if a mixture contains less than 1% of a hazardous chemical or 0.1% of a carcinogen, the mixture shall not be considered hazardous.

**Potential Hazard:** The only hazards identified with this product are those associated with sodium azide, which is present at very low concentrations.
All hazard information pertinent to these products has been provided in the Material Safety Data Sheet per requirements of the OSHA Hazard Communication Standard(29 CFR 1910.1200).
**Special Precautions:**
**Symptoms of Over-Exposure by Route of Exposure:** No major adverse health effects should occur from routine occupational use of these materials in the

manner specified by the manufacturer's instructions. The only likely symptom of exposure would be reddening or inflammation after accidental ingestion or injection. If this occurs, consult with a physician.

## 4. FIRST AID MEASURES

**Skin Exposure:** Basic hygiene should prevent any problems. If contact with these products leads to reddening, inflammation, or irritation, flush exposed area with running water and consult with a physician.
**Eye Exposure:** If these products enter the eyes, flush the eyes with gently running water for at least 15 minutes. If inflammation occurs, consult with a physician.
**Inhalation:** Vapors of these products are likely to be only water vapors, so no adverse health effects are expected if vapors are inhaled.
**Ingestion:** These products are for *in vitro* research use only, not for household, diagnostic, or therapeutic use. They are not medical devices. If these products are accidentally swallowed, no adverse health effects are expected. However, no special precautions are taken to remove or detect the possible presence of endotoxin or pyrogens. If fever or adverse effects are experienced, consult with a physician.

## 5. FIRE-FIGHTING MEASURES

**Unusual Fire and Explosion Hazards:** If involved in a fire, these products may decompose and produce irritating fumes or toxic gasses.
**Flash Point:** N/A
**Autoignition Temperature:** N/A
**Flammable Limits (In Air By Volume, %):** N/A
**Fire-Extinguishing Materials:** Use suppression methods for surrounding materials.

## 6. ACCIDENTAL RELEASE MEASURES

**Spill and Leak Response:** For small releases, treat the products as water, but take basic hygiene precautions. Lightweight gloves, lab coat, and eye protection should be worn. Absorb spilled material with paper towels. Wash contaminated area with soap and water, absorb with paper towels, and rinse with water. Trained personnel using pre-planned procedures should respond to large releases that are not immediately controlled. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

In the event of a non-incidental, minimum release, personal protective equipment should be: **Level D:** lab gloves, chemical resistent apron, boots, and splash goggles. Respiratory protection should not be necessary. Absorb spilled liquid with poly pads or other suitable materials. Decontaminate the spill area thoroughly. Place all spill residues in a suitable container and seal. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations.

## 7. HANDLING and STORAGE

**Work Practices and Hygiene Practices:** As with all chemicals, avoid getting these products **on you** or **in you**. Wash hands after handling these products. Avoid splashing or spraying these products. Do not eat or drink while handling these products.
**Storage And Handling Practices:** All employees who handle these materials should be trained to handle them safely. Avoid breathing vapors or mists generated by these products. Ensure that containers of these products are properly labeled. Open containers slowly on a stable surface. Store vials as directed in the Product Specifications sheets. Keep vials tightly closed under sterile conditions when not in use. Prior to use, read instructions provided with these products.
**Protective Practices During Maintenance of Contaminated Equipment:** Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, as applicable. Always use these products in areas where adequate ventilation is provided. Decontaminate equipment using soapy water before maintenance begins. Collect all rinses and dispose of according to applicable Federal, State, and local procedures.

## 8. EXPOSURE CONTROLS-PERSONAL PROTECTION

**Ventilation and Engineering Controls:** Use a mechanical fan or vent area to outside, if necessary. Eye-wash stations should be available near location where these products are used.
**Respiratory Protection:** Respiratory protection is not necessary when using these products. Maintain airborne contaminant concentration below limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in Section 29 CFR 1910.134 or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown.
**Eye Protection:** Splash goggles or safety glasses.
**Hand Protection:** Wear gloves for routine industrial use.
**Body Protection:** Use body protection, such as a lab coat, which is appropriate for the task.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**Relative Vapor Density (Air=1):** N/A
**Specific Gravity (Water=1):** N/A
**Solubility in Water:** Soluble
**Appearance and Color:** Clear, colorless as water
**How To Detect This Substance:** As water, there are no unusual properties associated with these solutions.
**Evaporation Rate:** Similar to water
**Freezing/melting Point:** N/A
**Boiling Point:** N/A
**pH:** 7.6

## 10. STABILITY and REACTIVITY

**Stability:** Stable
**Decomposition Products:** Carbon dioxide, carbon monoxide, ammonia, hydrogen chloride, oxides of nitrogen, phosphorous, and sulfur.
**Hazardous Polymerization:** Will not occur.
**Conditions To Avoid:** Any conditions which are incompatible with water or other incompatible chemicals.

## 11. TOXICOLOGICAL INFORMATION

**Toxicity Data:**
Sodium azide: Oral Rat, LD 50, 27mg/kg
Sodium Chloride: Oral Rat, LD50, 3,000 mg/kg
Sodium Phosphate: Oral Rat, LD50, 17g/kg
Antibody Protein: NE
**Suspected Cancer Agent:** The chemicals in these products are not found in the following lists: NTP, IARC, Federal OSHA Z-list, and CAL-OSHA, and therefore are not considered to be, nor suspected by these agencies to be carcinogenic.
**Irritancy Of Products:** Although not tested, the components of these products are not expected to cause skin irritation. Mild eye irritation may occur if this product enters the eye.
**Sensitization To The Products:** The chemicals in these products are not known to be sensitizers with prolonged or repeated use.
**Reproductive Toxicity:** These products are not reported at this time to cause adverse reproductive effects in humans.
**Mutagenicity:** These products are not reported to cause mutagenic effects in humans.
**Embryo Toxicity:** These products are not reported to cause human teratogenic effects.
**Teratogenicity:** These products are not reported to cause human teratogenic effects.
**Medical Condition Aggravated by Exposure:** No specific medical conditions are known to be aggravated by exposure to dilutions of these products.
**Recommendation to Physician:** These products are not expected to cause clinical symptoms. If symptoms occur, treat the symptoms and eliminate over-exposure.

**Biological Exposure Indices (BEI's):** Currently, there are no Biological Exposure Indices applicable to the components of these products.

## 12. ECOLOGICAL INFORMATION

**Environmental Stability:** The chemicals in these products will degrade in the environment into organic and inorganic constituents.
**Effect of Products on Plants and Animals:** No unusual effects on plants and animals are expected if these products are released into the environment. See section 11 (Toxicological Information) for further information regarding the effects of chemicals in these products on test animals.

## 13. DISPOSAL CONSIDERATIONS

**Preparing Wastes For Disposal:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if altered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.
**EPA Waste Number:** Not applicable to these products.

## 14. TRANSPORTATION INFORMATION

**This material is not hazardous as defined by 49 CFR 172.101 by the U.S. Department of Transportation. This material is not considered as Dangerous Goods.**
**Proper Shipping Name:** N/A
**Hazardous Class Number and Description:** N/A
**UN Identification Number:** N/A
**Packing Group:** N/A

## 15. REGULATORY INFORMATION

**SARA Reporting Requirements:** These products are not subject to Section 302, 304, and 313 reporting requirements under the Superfund Amendment and Reauthorization Act.

**Chemical SARA 302, SARA 304, SARA 313**
**SARA Threshhold Planning Quantity:** N/A
**TSCA Inventory Status:** N/A
**CERCLA Reportable Quantity (RQ):** N/A
**Other Federal Regulations:** N/A

## 16. OTHER INFORMATION

**Created:** October 10, 2010
**Revised:** March 19, 2013
**Prepared By:** Jackson ImmunoResearch Laboratories, Inc.
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**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.**