



SIGMA-ALDRICH

Material Safety Data Sheet

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Section 1 - Product and Company Information

Product Name: Anti-Cytochrome c, Developed in Sheep, Whole antiserum
Product Number: C5723
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Table with 5 columns: Substance Name, CAS #, SARA 313, EC no, Annex I Index Number. Includes rows for SHEEP ANTI-CYTOCHROME C, WHOLE SERUM and SODIUM AZIDE.

Section 3 - Hazards Identification

Emergency Overview: Sodium azide may react with lead and copper plumbing to form highly explosive metal azides.

HMIS Rating: Health: 0, Flammability: 0, Reactivity: 1

NFPA Rating: Health: 0, Flammability: 0, Reactivity: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure: If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure: If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Explosion Hazards: Azide reacts with many heavy metals such as lead, copper, mercury, silver, gold to form explosive compounds. Copper and lead azides are more sensitive than nitroglycerine.

Autoignition Temp: N/A

Extinguishing Media: Suitable. Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s): Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up: Spilled material should be carefully wiped up or moistened with water and removed. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling: User Exposure. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage: Suitable. Keep tightly closed. Store at -20°C

Section 8 - Exposure Controls / PPE

Engineering Controls: Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment: Respiratory. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Hand: Compatible chemical-resistant gloves. Eye: Chemical safety goggles.

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**General Hygiene Measures**

Wash thoroughly after handling. Wash contaminated clothing before reuse.

**Section 9 - Physical/Chemical Properties****Appearance**

**Physical State**  
Liquid

**Molecular Weight:** N/A

**pH** N/A  
**BP/BP Range** N/A  
**MP/MP Range** N/A  
**Freezing Point** N/A  
**Vapor Pressure** N/A  
**Vapor Density** N/A  
**Saturated Vapor Conc.** N/A  
**SG/Density** N/A  
**Bulk Density** N/A  
**Odor Threshold** N/A  
**Volatle%** N/A  
**VOC Content** N/A  
**Water Content** N/A  
**Solvent Content** N/A  
**Evaporation Rate** N/A  
**Viscosity** N/A  
**Partition Coefficient** N/A  
**Decomposition Temp.** N/A  
**Flash Point °F** N/A  
**Flash Point °C** N/A

**Explosion Limits** N/A

**Flammability** N/A  
**Autoignition Temp** N/A  
**Solubility** N/A

N/A = not available

**Section 10 - Stability and Reactivity****Stability**

**Stable**  
Stable.

**Materials to Avoid**

Dimethyl sulfate is incompatible with sodium azide, Acid chlorides, Halogenated solvents, Avoid contact with metals., Avoid contact with acid., Sodium azide may react with lead and copper plumbing to form highly explosive metal azides.

**Hazardous Decomposition Products****Hazardous Decomposition Products**

Nature of decomposition products not known.

**Hazardous Polymerization**  
**Hazardous Polymerization**  
Will not occur.

**Section 11 - Toxicological Information****Route of Exposure****Skin Contact**

May cause skin irritation.

**Skin Absorption**

May be harmful if absorbed through the skin.

**Eye Contact**

May cause eye irritation.

**Inhalation**

Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

**Ingestion**

May be harmful if swallowed.

**Signs and Symptoms of Exposure**

Many azides cause a fall in blood pressure and some inhibit enzyme action. Laboratory experiments in animals have shown sodium azide to produce a profound hypotensive effect, demyelination of myelinated nerve fibers in the central nervous system, testicular damage, blindness, attacks of rigidity, and hepatic and cerebral effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number:** N/A

**Section 12 - Ecological Information**

No data available.

**Section 13 - Disposal Considerations****Appropriate Method of Disposal of Substance or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.  
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.  
Observe all federal, state, and local environmental regulations.

**Section 14 - Transport Information****DOT**

**Proper Shipping Name:** None

**Non-Hazardous for Transport:** This substance is considered to be non-hazardous for transport.

**IATA**

**Non-Hazardous for Air Transport:** Non-hazardous for air transport.

**Section 15 - Regulatory Information****US Classification and Label Text****US Statements**

Sodium azide may react with lead and copper plumbing to form highly explosive metal azides.

**United States Regulatory Information**

**SARA Listed:** No

**Canada Regulatory Information****WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No  
NDSL: No

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**Section 16 - Other Information**

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**Disclaimer**

For R&D use only. Not for drug, household or other uses.

**Warranty**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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