



Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

Product: N-Acetyl-L-Cysteine
This MSDS is valid for all grades and catalog #'s

Synonyms: L-alpha-acetamido-beta-mercaptopro ionic acid
Formula: C5H9NO3S

Manufacturer: PHARMCO-AAPER
58 Vale Road
Brookfield, Connecticut 06804, USA
Phone (203) 740-3471
Fax (203) 740-3481

1101 Isaac Shelby Drive
Shelbyville, KY 40065
Phone (502) 633-0650
Fax (502) 633-0685

Emergency Contact:
CHEMTREC 1-800-424-9300

SECTION II

COMPOSITION /INFORMATION ON INGREDIENTS

% by weight	Material	CAS #	TLV/PEL	LC50/LD50
100	{N-} Acetyl{-L-} Cysteine	616-91-1	NA	ORAL (LD50) Acute: 5050 mg/kg [Rat]. 7888 mg/kg [Mouse].

SECTION III

HAZARDS IDENTIFICATION

Potential Acute Health Effects: Very hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects: Very hazardous in case of skin contact (irritant, Chronic Health permeator), of eye contact (irritant), of ingestion, of inhalation.

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

SECTION IV

FIRST AID

Obtain medical attention for all cases of over-exposure.

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Hazardous Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

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

Hazardous Inhalation: Not Available

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Hazardous Ingestion: Not Available

SECTION V

FIRE FIGHTING MEASURES

Fire:

Flammability of the Product: May be combustible at high temperature

Auto-Ignition temperature: Not Available

Flash point: Not Available

Flammable limits: Not Available

Products of Combustion: The products are Carbon Oxides (CO, CO₂) Nitrogen Oxides (NO, NO₂...).

Fire Hazards: Not Available

Explosion Hazards: Risks of explosion of the product in presence of mechanical impact: Not Available. Risks of explosion of the product in presence of static discharge: Not Available

Fire Extinguishing Media: Small Fire: Use DRY chemical powder. Large Fire: Use water spray, fog or foam. Do not use water jet.

Special Information: Not Available

SECTION VI

SPILL/ACCIDENTAL RELEASE MEASURES

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

SECTION VII

HANDLING AND STORAGE

Precautions: Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

SECTION VIII

EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not Available

SECTION IX

PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance: Solid. (Crystalline solid.)

Molecular Weight: Not Available

Odor: Not Available

Taste: Not Available

Color: White.

pH (1% Solution in Water): Not Available

Boiling Point: Not Available

Melting Point: 109°C (228.2°F)

Critical Temperature: Not Available

Specific Gravity: Not Available

Vapor Pressure (mm Hg): Not Available

Vapor Density (Air=1): Not Available

Volatility: Not Available

Odor Threshold: Not Available

Evaporation Rate: Not Available

Viscosity: Not Available

Water/Oil Dist. Coefficient: Not Available

Ionicity (in water): Not Available

Dispersion Properties: Not Available

Solubility: Not Available

SECTION X

STABILITY/REACTIVITY INFORMATION

Stability: The product is stable.

Instability Temperature: Not Available

Conditions of Instability: Not Available

Incompatibilities: Slightly reactive to reactive with oxidizing agents.

Corrosivity: Not considered to be corrosive for metal and glass

Special Information: Not Available

SECTION XI

TOXICOLOGICAL INFORMATION

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 5050mg/kg [Rat]

Chronic Effects on Humans: Not Available

Other Toxic Effects on Humans: Very Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Information on Toxicity to Animals: Not Available

Special Information on Chronic Effects/Toxicity on Humans: Not Available

SECTION XII

ECOLOGICAL INFORMATION

Ecotoxicity: Not Available

BOD5 and COD: Not Available

Products of Biodegradation: Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Information on Products of Biodegradation: Not Available

SECTION XIII

DISPOSAL CONSIDERATIONS

Waste Disposal: Recycle to process, if possible. Consult your local or regional authorities.

SECTION XIV

TRANSPORTATION INFORMATION

DOT Classification: DOT Not a DOT controlled material (United States)

UN: Not Applicable.

Special Provisions for Transport: Not Applicable

SECTION XV REGULATORY INFORMATION

Federal and State Regulations: Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: **NONE**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: **NONE**

Pensylvania Right-To-Know, Hazardous substance List, Hazardous Substances and Special hazardous Substances on the list must be identified when present in products. Components present in this product at a level which could require reporting under the statute are: **NONE**

Massachusetts Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are: **NONE**

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are: **NONE**

Other Classifications:

WHMIS (Canada): CLASS D-2B: Material causing other toxic effects (TOXIC)

DSCL (EEC): R38- Irritating to skin. R41-Risk of serious damage to eyes

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

References: Not Available

Other Special Considerations: AC125, AC126

The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.