



MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

Product: 6-Aminocaproic acid
This MSDS is valid for all grades and catalog #'s

Synonyms: 6-Aminohexanoic Acid; omega-Aminocaproic Acid; omega-Aminohexanoic acid

Formula: C₆H₁₃NO₂

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	{6- }Aminocap roic acid	60-32-2	Not available.	ORAL (LD50): Acute: 14300 mg/kg [Mouse]. >7000 mg/kg [Dog]
-----	-------------------------------	---------	-------------------	--

SECTION III

HAZARDS IDENTIFICATION

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to blood, kidneys. Repeated or prolonged exposure to the substance can produce target organs damage.

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. Cold water may be used. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Hazardous Skin Contact: Not available.

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: These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire Hazards: Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards: Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

Fire Extinguishing Media: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Information: As with most organic solids, fire is possible at elevated temperatures. Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

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. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.

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: Safety glasses. 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: 131.18 g/mole

Odor: Odorless.

Taste: Tasteless.

Color: White.

pH (1% Solution in Water): Not available.

Boiling Point: Not available.

Melting Point: 202°C (395.6°F) - 203 C

Critical Temperature: Not available

Specific Gravity: Not available

Vapor Pressure (mm Hg): Not applicable.

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: See solubility in water.

Solubility: Soluble in cold water. Insoluble in diethyl ether. Slightly soluble in alcohol. Practically insoluble in chloroform. Solubility in water: 1 gram in 3 ml of water

SECTION X STABILITY/REACTIVITY INFORMATION

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, dust generation, incompatible materials

Incompatibilities: Not available

Corrosivity: Non-corrosive in presence of glass.

Special Information: Not available.

SECTION XI TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): >7000 mg/kg [Dog].

Chronic Effects on Humans: May cause damage to the following organs: blood, kidneys.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Information on Toxicity to Animals: Not available.

Special Information on Chronic Effects/Toxicity on Humans: May cause adverse reproductive effects based on animal test data, but this data is limited and equivocal. Also, there is a case report of use of this agent burring human pregnancy without apparent adverse fetal effects (Reprotox System database). Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause mild eye irritation. Inhalation: May cause respiratory tract irritation. Ingestion: Expected low hazard. May cause nausea, heartburn, diarrhea, itching, skin redness, skin rash, nasal stuffiness, Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may affect behavior/central nervous system (excitement, muscle weakness), metabolism (weight loss), blood (changes in red and white blood cell count), heart, urinary system/kidneys (hematuria, renal failure, tubular necrosis), liver.

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 product itself and its products of degradation are not 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: California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): Not available

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

References: Not available.

Other Special Considerations: Not available.

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.