



PLATAMID (R) H106 PA 80 COPOLYAMIDE

Material Safety Data Sheet

Arkema Inc.

1 PRODUCT AND COMPANY IDENTIFICATION

Technical Polymers

Arkema Inc.
2000 Market St.,
Philadelphia, PA 19103-3222

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Engineering Polymers (Pebax & Rilsan)	(800) 932 - 0420	Mon - Fri 8:00am - 6:00pm EST
Fluoropolymers (Kynars)	(800) 722 - 9668	Mon - Fri 8:00am - 6:00pm EST

Product Name PLATAMID (R) H106 PA 80 COPOLYAMIDE

Product Synonym(s)

Chemical Family Polyamide

Chemical Formula

Chemical Name See Composition

EPA Reg Num

Product Use Thermoplastic Adhesive

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
Polyamide copolymer	27967-39-1	> 95	N
Caprolactam	105-60-2	< 5	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

White powder. Odor of caprolactam may be detected.

WARNING!

MELT PROCESSING RELEASES CAPROLACTAM WHICH:
MAY CAUSE EYE AND SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTIONS

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. As finished products, Platamids(R) are synthetic, high molecular weight polyamide copolymers. Many Platamid(R) copolyamides are based on caprolactam, lauryllactam and other copolyamide forming monomers. As such, this Platamid(R) material contains some residual caprolactam dissolved in the high molecular weight copolyamide. Under normal processing conditions, this product will release fume or vapor. Components of these releases may vary with processing times and temperatures; however, the majority of this released material is expected to be caprolactam and water. During melt processing of this product, 10 to 60% of the residual caprolactam will be released as vapor; the



amount will depend on the temperature of the melt processing and the molten surface area exposed. Based on single exposure animal tests, caprolactam is considered to be slightly toxic if swallowed, inhaled or absorbed through skin and moderately irritating to eyes. Direct contact can cause skin irritation. High vapor concentrations are irritating to the eyes and respiratory tract, and may result in central nervous system (CNS) effects such as headache, dizziness, nausea, drowsiness and, in severe exposures, convulsions and loss of consciousness. Repeated exposure may cause an allergic skin or respiratory reaction that could lead to bronchial asthma and nasal inflammation. Medical conditions that may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

4 FIRST AID MEASURES

IN CASE OF CONTACT, flush the area with plenty of water. Remove material from clothing. Wash clothing before reuse.

In case of contact with molten or hot polymer, treat for thermal effects. If in eyes, immediately flush with plenty of water for at least 15 minutes. Do not remove contact lenses, if worn. Get medical attention immediately, preferably from an ophthalmologist. If on skin, immediately flush the area with plenty of water for at least 15 minutes. Remove any clothing, jewelry and debris from the burned area leaving blisters intact. Do not remove residual polymer. Cover wounded area with a gauze dressing moistened with cool water. Get medical attention immediately.

IF SWALLOWED, induce vomiting immediately as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If breathing is difficult, get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	NE	
Flash Point	NE	Flash Point Method
Flammable Limits- Upper	NA	
Lower	NA	

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

When burned, the following hazardous products of combustion can occur: Oxides of carbon and nitrogen

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Contain, vacuum up, place in non-sparking container for disposal. Prevent waterway contamination. Construct a dike to prevent spreading. Collect run-off and transfer to drums or tanks for later disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE



7 HANDLING AND STORAGE

Handling

Avoid contact with eyes. Avoid prolonged contact with eyes, skin and clothing. Wash thoroughly after handling. Do not taste or swallow. Avoid breathing processing fumes or vapors. Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing. Process using adequate ventilation. Keep container tightly closed.

Storage

Store in a cool, dry place. This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Eye / Face Protection

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing dust. Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Other Exposure Limits - Ingredients

*OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for nuisance dusts or Particles Not Otherwise Specified (PNOS) which are the least stringent exposure limits applicable to dusts. The OSHA PEL/TWA for nuisance dusts is 15 mg/m³total dust (TD), and 5 mg/m³respirable dust (RD). The ACGIH TLV/TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS) is 10 mg/m³inhalable particulate and 3 mg/m³respirable particulate.

Airborne Exposure Guidelines for Ingredients

Exposure Limit	Value
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Caprolactam

ACGIH TWA -Inhalable fraction, vapor and aerosol 5 mg/m³

- Only those components with exposure limits are printed in this section.
- Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
- ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
- WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	White powder. Odor of caprolactam may be detected.
pH	
Specific Gravity	1.1
Vapor Pressure	NE
Vapor Density	NE
Melting Point	113 deg C
Freezing Point	
Boiling Point	NE
Solubility In Water	Negligible
Evaporation Rate	NE
Percent Volatile	NE

10 STABILITY AND REACTIVITY**Stability**

This material is chemically stable under normal and anticipated storage and handling conditions.

Hazardous Polymerization

Does not occur.

Incompatibility

Contact with acids and strong oxidizing agents may cause a low energy release.

Hazardous Decomposition Products

Oxides of carbon and nitrogen

11 TOXICOLOGICAL INFORMATION**Toxicological Information**

No toxicity studies have been conducted on polyamide copolymers, and no information on this or a similar material was found in a search of the scientific literature. However, data on unreacted caprolactam, which is anticipated to be present at <5%, are summarized below.

Caprolactam

Single exposure (acute) studies indicate that this material is slightly toxic if swallowed (rat LD50 1,150-2,500 mg/kg), absorbed through skin (rabbit LD50 1,410-3,375 mg/kg) or inhaled (rat 4-hr LC50 176 ppm, dust), moderately irritating to rabbit eyes and non-irritating to slightly irritating to rabbit skin. Allergic skin reactions (sensitization) have been reported in humans. Skin sensitization studies in guinea pigs have produced both positive and negative results. Effects following human exposure to vapor include severe nose, throat and eye discomfort, a bitter taste, nervousness, nosebleeds, inflammation of the membranes of the respiratory tract, and dry and splitting nose and lips. An incident involving seizures, nausea, vomiting, low-grade fever, and dermatitis of the hands and feet has been attributed to occupational exposure. Studies of workers occupationally exposed showed no effects on lung function or blood parameters.

Effects associated with acute toxicity in animals were eye and respiratory tract irritation, signs of apprehension, and labored breathing followed by tremors and violent convulsions. Although recovery was complete if the animals survived, death was usually attributed to respiratory arrest. Repeated inhalation exposure to dust identified the nervous system, reproductive system, respiratory system and kidney as target organs in rats. Repeated dietary administration produced microscopic changes to the kidneys in rats while no effects were observed in dogs. Long-term dietary administration produced no tumors in rats and mice. The International



11 TOXICOLOGICAL INFORMATION

Agency for Research on Cancer (IARC) has determined that this material is probably not carcinogenic to humans (Group 2A). Reduced fertility and deaths of embryos were reported in rats after repeated inhalation exposure. No effects on the ability of male and female rats to reproduce were observed following dietary administration for 3 successive generations. No birth defects were observed in the offspring of rats or rabbits exposed orally during pregnancy. Generally, no genetic changes were observed in tests using bacteria or animal cells, although positive responses were reported in assays with fruit flies, yeast and human cells.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

No ecological effect studies have been conducted on polyamide copolymers, and no information on this or a similar material was found in a search of the scientific literature. However, data on unreacted caprolactam, which is anticipated to be present at <5%, are summarized below.

Caprolactam

This material is practically non-toxic to *Daphnia magna* (48-hr LC50 820 mg/l), bluegill sunfish (120-hr LC50 880 mg/l), channel catfish (96-hr LC50 1000 mg/l) and fathead minnow (96-hr LC50 1400 mg/l). The 21-day EC50 for *Daphnia magna* in relation to survival, growth and reproduction was >320.5 mg/l.

Chemical Fate Information

No ecological effect studies have been conducted on polyamide copolymers, and no information on this or a similar material was found in a search of the scientific literature. However, data on unreacted caprolactam, which is anticipated to be present at <5%, are summarized below.

Caprolactam

This material is expected to be biodegradable in most aerobic systems. The log Pow is -0.19.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Recover, reclaim or recycle when practical. Dispose of in an approved landfill if allowed locally. Comply with federal, state, and local regulations. Dispose of in a permitted waste management facility if incineration or landfill is not practical.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name	Not Regulated
DOT Technical Name	
DOT Hazard Class	
UN Number	
DOT Packing Group	PG
RQ	

15 REGULATORY INFORMATION



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Arkema Inc.

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	N
Delayed (Chronic) Health	Y	Reactive	N
		Sudden Release of Pressure	N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities

	CERCLA RQ	SARA TPQ
Caprolactam	NE	
Polyamide copolymer	NE	

Massachusetts Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Caprolactam

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Caprolactam

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Caprolactam

16 OTHER INFORMATION

Revision Information

Revision Date	11 OCT 2004	Revision Number	5
Supersedes Revision Dated	27-SEP-2001		

Revision Summary

ATOFINA Chemicals, Inc. has changed its name to Arkema Inc.

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

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