

# Raychem

## MATERIAL SAFETY DATA SHEET

Issue No.: 10

Effective Date: November 1995

Serial No.: RAY/3002

### PRODUCT IDENTIFICATION

<b>Product Name:</b>	Thermofit S-1006 Adhesive, Parts A & B	<b>Chemical Name:</b>	Not applicable, mixture
		<b>CAS #:</b>	Not applicable, mixture
		<b>DOT Proper Shipping Name:</b>	Not regulated
<b>Manufacturer:</b>	Raychem Corporation 300 Constitution Drive Menlo Park, CA 94025	<b>DOT Identification No.:</b>	Not regulated
		<b>DOT Hazard Classification:</b>	Not regulated
		<b>TSCA Inventory Status:</b>	All ingredients are listed

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE or ACCIDENT**  
Call CHEMTREC - Day or Night - 1-800-424-9300 Toll free in the continental U.S., Hawaii, Puerto Rico, Canada, Alaska or Virgin Islands. For calls originating elsewhere: (703) 527-3887 (collect calls accepted)

For non-emergency health and safety information, call: (650) 361-4907

### HAZARDOUS INGREDIENTS

This product is a two-part epoxy resin.

Part A: Bisphenol A/Epichlorohydrin Epoxy Resin (CAS # 25068-38-6)

Part B: Polyamide/Amine Blend (CAS Nos. 68410-23-1)

### PHYSICAL PROPERTIES

**Appearance and Odor:** Part A: Viscous purple liquid. No odor.  
Part B: Tan liquid. Odor of ammonia.

**Boiling Point:** Part A: >500°F (260°C)  
Part B: Not Determined

**Vapor Pressure:** Part A: 0.03 mm Hg @77°C  
Part B: Not Determined

**Volatility (% by volume):** Part A: Not Determined  
Part B: 0 @ 70°F

**Vapor Density:** Part A: Not Determined  
Part B: Not Determined

**Specific Gravity (Water = 1):** Part A: 1.17  
Part B: 0.97

**Evaporation Rate:** Part A: Not Determined  
Part B: Not Determined

**Flash Point/Method:** Part A: 480°F (249°C)/Closed Cup  
Part B: > 365°F (>185°C)/Open Cup

**Solubility in Water (%):** Part A: Negligible  
Part B: 1-10%

**Flammable Limits in Air (volume%):** lower Not Established upper Not Established

### HEALTH HAZARD INFORMATION

**Exposure Limits:** Part A: Bisphenol A/Epichlorohydrin Epoxy Resin: None Established  
Part B: Polyamide/Amine Blend: None Established

**Health Effects/Symptoms of Exposure:**

The health effects described below refer to the uncured resin, Parts A & B. The information presented below corresponds to the individual components of this product. Toxicity studies have not been performed on the mixture as a whole.

**Acute (Short-Term Exposure):**

- Eye Contact:** Part A: This material is an eye irritant. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, and swelling. Contact with molten material may cause thermal burns. Persons with pre-existing eye disorders may be more susceptible to the effects of this material.
- Part B: This material is a severe eye irritant. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, swelling, and eye damage. Persons with pre-existing eye disorders may be more susceptible to the effects of this material.
- Skin Contact:** Part A: This material is a skin irritant. Direct contact or exposure to vapors or mists may cause redness and burning and skin damage. Repeated contact may cause an allergic skin reaction in sensitized individuals. Persons with pre-existing skin disorders may be more susceptible to the effects of this material. No harmful effects are expected from skin absorption of this material. Contact with molten material may cause thermal burns.
- Part B: This material may cause mild skin irritation. Prolonged or repeated contact or exposure to vapors or mists may cause redness and burning. Persons with pre-existing skin disorders may be more susceptible to the effects of this material. Contact may result in skin absorption but symptoms of toxicity are not anticipated by this route alone under normal conditions of use.

**Ingestion (Swallowing):**

- Part A: Ingestion of this material is highly unlikely. However, if swallowed, this product is expected to have a low degree of toxicity by ingestion.
- Part B: This material may be fatal or harmful if swallowed. Ingestion may result in severe irritation and burns of the mouth, throat, and digestive tract.

**Inhalation (Breathing):**

- Part A: Because of its low volatility, exposure to vapors is unlikely. In common with most organic materials, thermal degradation and combustion byproducts may be toxic and should not be inhaled. See comments below and the Thermal Degradation and Combustion Byproducts sections for more specific information.
- Part B: Exposure to vapors or fumes may cause irritation of the respiratory tract. Pre-existing lung disorders (e.g., asthma-like conditions) may be aggravated by exposure to this material.

**Chronic (Long-Term Exposure):**

The ingredients of this product, present at equal to or greater than 0.1% of the product, are not listed by OSHA, NTP, or IARC as suspect carcinogens.

A component of Part A of this product (Bisphenol A/-Epichlorohydrin Epoxy Resin) is positive in *in vitro* microbial mutagenicity screening tests, and has produced chromosomal aberrations in cultured rat liver cells.

It has, however, proven to be inactive when tested in *in vivo* mutagenicity assays. (Note: Mutagenicity assays are a means to identify if a chemical may cause changes in the genetic material (DNA) of a cell).

A component of Part B (polyamide resin) is also suspected of being able to cause change in the genetic material (DNA) of a cell. What these findings mean to humans is uncertain.

**Comments:** Overheating the material to temperatures above 300°F (149°C) may produce vapors that may cause eye, skin, nose, and throat irritation. Respiratory symptoms associated with pre-existing lung disorders (e.g., asthma conditions) may be aggravated by exposure to overheated material.

## STORAGE, HANDLING, AND PREVENTATIVE MEASURES

**Stability at room temperature:** Stable.

**Conditions to Avoid:** Avoid excessive heat for prolonged periods of time.

**Incompatibilities:** Part A: Avoid contact with strong oxidizers, acids and bases, especially primary and secondary aliphatic amines. Part B: None known.

**Hazardous Polymerization:** Hazardous polymerization will not occur. Polymerization may occur above 500°F. Some curing agents, e.g., aliphatic polyamines, can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants.

**Thermal Degradation and Combustion Byproducts:** Thermal degradation and combustion byproducts may be toxic and should not be inhaled. Thermal degradation is not significant at temperatures achieved during proper application, as directed by product instructions. At temperatures above 300°F, or most significantly if the products are burned, the thermal degradation and combustion byproducts may include, but are not limited to, carbon monoxide, ammonia, aldehydes, acids and other organic substances, and oxides of nitrogen

**Handling:** Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Thoroughly clean shoes before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. Avoid breathing vapors or mists. Application of adhesive (Parts A & B) should be done in a well-ventilated area.

**Other Precautions:** Containers, even those that have been emptied, can contain hazardous product residues. Handle in accordance with the precautions outlined in the Handling Section above. Parts A and B release heat when combined. Protect packets from physical damage to avoid leaks and spills.

**Storage:** Store in a cool, dry area. Keep away from open flames and high temperatures. Keep container closed.

**Ventilation:** In accordance with good industrial hygiene practice, ensure adequate ventilation during application.

**Respiratory Protection:** Depending on the airborne concentration of material, use a NIOSH/MSHA-approved air purifying respirator with organic vapor cartridges. At temperatures above 300°F (149°C), hazardous thermal degradation products may be released. Therefore, if temperatures exceed 300°F (149°C), air-supplied respirators are recommended.

**Protective Clothing:** Avoid contact with eyes. Use safety glasses with side shields or goggles to prevent contact. Avoid prolonged or repeated contact with skin. Wear rubber gloves to prevent or minimize contact.

**Disposal:** This product is a non-hazardous waste in accordance with U.S. EPA regulations. Classification according to all local and state hazardous waste regulations is required before disposal.

## EMERGENCY AND FIRST AID PROCEDURES

This product is a two-part epoxy resin. The first aid instructions below refer to exposure to Part A or Part B of the uncured resin.

**Eyes:** Hold eyelids apart and flush affected eye(s) immediately with clean water for at least 15 minutes. Seek immediate medical attention.

**Skin:** Flush skin with plenty of water and wash affected area(s) with soap and water. Remove contaminated clothing and wash before reuse. Thoroughly clean shoes before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. If irritation persists, seek medical attention. If contact with hot product occurs, immediately flush with cool water for 15 minutes. Carefully remove clothing; if clothing is stuck to a burned area do not pull it off, but cut around it. Cover burned area with a clean material and seek medical attention immediately.

**Ingestion:** Not a normal route of exposure. DO NOT induce vomiting. If victim is conscious and alert, immediately rinse mouth with water and dilute the ingested material by giving one glass of water to drink. Seek immediate medical attention.

**Inhalation:** If respiratory symptoms or other symptoms of exposure develop, move victim to fresh air. If symptoms persist, seek medical attention. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention. If victim is not breathing, immediately begin artificial respiration. Keep victim warm and quiet; seek immediate medical attention.

**Steps to be Taken in Case of Release or Spill:** Wear appropriate personal protection when responding. Contain spill with inert absorbent. Take measures to stop spillage at the source. Transfer contaminated absorbent into a container and dispose in accordance with local, state and federal laws. Wash area with dilute (5%) acetic acid, pickup with inert absorbent and dispose of properly.

**Unusual Fire and Explosion Hazards:** Toxic fumes may be given off in a fire. See sections on Thermal Degradation and Combustion Byproducts and Other Precautions.

**Special Fire Fighting Procedures:** Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires. Use water spray to cool nearby containers and structures exposed to fire. Do not use solid stream appliance.

**Extinguishing Media:** carbon dioxide  X  water  \_\_\_  dry chemical  X  foam  X  other  \_\_\_\_\_

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**Data Sheet Prepared By:** Linda Massey, Corporate Toxicology

**Date:** November 1995

**Data Sheet Approved By:** Ron Watson, Thermofit Division

**Date:** November 1995