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MATERIAL SAFETY DATA SHEET

Ultem® 1000, 1000F

EMERGENCY TELEPHONE: 724-746-6050 or 856-227-0500
Issue Date: June 1, 1989
Revised Date: July 6, 2004
TRADE NAME: Ultem 1000, 1000F
CHEMICAL NAME: Polyetherimide

1. Physical Property Data

Ignition Temperature Test: ASTM D1929 (Setchkin Method)
Flash Ignition: 521°C (970°F)
Self Ignition: 538°C (1000°F)
Solubility In Water: Insoluble
Color: Transparent Amber or Opaque Colors
Odor: None to minimal

2. Fire and Explosion Hazards

Flammability: Ultem burns with difficulty because a substantial amount of energy is required to break down the polymer into smaller fragments which will support combustion. Generally, a continuous external flame source is needed to initiate and sustain combustion. In the absence of flashover fire conditions, an Ultem resin fire will tend to extinguish itself. Precautions similar to those taken with wood and other combustible materials are recommended.

Smoke: Ultem when exposed to an external flame, will form a surface char and emit low levels of smoke reflecting the inherent combustion resistance of polyetherimide.

Toxicity: The primary toxic product of combustion from Ultem polyetherimide is carbon monoxide. Carbon dioxide, an asphyxiant, is also produced. Under combustion conditions, Ultem does not produce bromine, phosgene, acrolein, hydrogen chloride, or sulfur dioxide.

Fire Fighting: Water is the best extinguishing medium. Carbon dioxide is not generally recommended because its lack of cooling capacity may permit re-ignition. MSHA/NIOSH approved pressure demand breathing apparatus should be used. Personnel without suitable respiratory protection should leave the area. Caution: stacked cardboard rein containers will be weakened by water absorption and may collapse.

Explosion: Ultem pellets, because of their size, do not present a dust explosion hazard.

Post-molding operations, such as regrinding and sawing, should be periodically checked for proper maintenance of dust control devices. Likely sources of ignition, such as static buildup, should be eliminated. Good housekeeping and adequate ventilation can prevent accumulations of potentially explosive dust concentrations. For addition information, see NFPA 654: "Standard for the Prevention Of Dust Explosions In The Plastics Industry" published by the National Fire Protection Association (Volume Five of the National Fire Codes).

3. Health Hazard Data

Oral Toxicity: Ultem resins have very low acute oral toxicity.

Dermal Toxicity / Irritation: Ultem resins have no demonstrable acute dermal toxicity.

Eye Irritation: Ultem resin, in the form normally sold or used, is not a primary eye irritant.

Fume Inhalation: Processing fumes from typical Ultem resins are not considered toxic.

Ventilation: Ventilation requirements for each particular workplace must be determined on an individual basis. In general, the continuous supply of fresh air to the general workplace area together with the with the continuous removal of processing fume contaminated air through exhaust hoods and associated enclosed ducting will provide adequate ventilation for most operations.

Protection: None required; however, use of protective gloves / clothing is good industrial practice.

4. First Aid Procedures

Some individuals with specific sensitivities may exhibit eye, nose, throat, or dermal irritation if overexposed to resin or processing fumes.

Eye Irritation: Flush eyes thoroughly with clean, low pressure water.

Skin Irritation: Wash affected areas with soap and water.

Respiratory Irritation: Leave the exposure area and obtain fresh air. Provide appropriate protection before allowing re-entry.

In all cases, a physician should be contacted if irritation persists. Molten resin can cause severe thermal burns with may require expert emergency attention.

5. Reactivity Data

Ultem polyetherimide resin is a stable thermoplastic solid compound and will not undergo hazardous polymerization.

6. Spill or Leak Procedures

Ultem resin pellets spilled on floors, aisles, and other working surfaces are a slipping hazard. Sweep, shovel, or vacuum spilled resin into containers for reuse or disposal.

7. Special Protection

In general, special protection beyond established industrial safety practices and procedures is not required for the handling or processing of Ultem resin.

Typical Protection Would Include:

Safety glasses with side shields

Substantial, well insulated gloves to prevent contact with hot polymer.

Face Shield and rubber gloves for cleaning processing fume deposits from exhaust hoods and other surfaces.

Self contained breathing equipment, if needed for fire fighting.

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe this information to be correct but cannot guarantee its accuracy or completeness. Health and safety precaution in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulation. No statement made in the data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.