

AR 226 - 3545

ATTACHMENT B

ALGOFLON D60 27

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SOLVAY SOLEXIS, Inc.
10 Leonards Lane
Thorofare, NJ 08086
856-853-8119

Section 1 - Chemical product and Company information

Date Revised: December 26, 2002

Product Name: ALGOFLON D60 27

Chemical Name: Aqueous dispersion of tetrafluoroethylene homopolymer and surfactant

Chemical Family: Fluoropolymer dispersion

Synonyms: Mixture

Emergency Telephone: 800-424-9300 (CHEMTREC, 24 hours)

856-853-8119

Emergency Overview:

White aqueous dispersion. Surfaces can be extremely slippery in the case of a spill.

Section 2 - Compositional information

Name:	CAS#	Approximate Weight (% wt.)
Tetrafluoroethylene homopolymer	9002-84-0 Teflon	59-61
Water	7732-18-5	35-38 Poly Ethylene Glycol
Triton X 100	9002-93-1	2-4 Octyl Phenol Ether
Ammonium Perfluorooctanoate	3825-26-1	<0.5

→ Ammonium Perfluorooctanoate

Section 3 - Potential Health Effects

Effects of Overexposure:

Eye Contact

Eye contact can cause irritation.

Skin Contact

Skin contact can cause irritation.

Inhalation

Inhalation of vapors or mist may cause irritation of the respiratory tract and mucous membranes.

Breathing fumes generated during processing of the polymer at temperatures above 315 °C (707 °F) can cause "polymer fume fever".

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Ingestion

Not an expected exposure route. Ingestion can cause gastrointestinal tract irritation, nausea, and vomiting.

Section 4 - First Aid Measures

Eye Contact:

Flush eyes for 15 minutes with copious amounts of water, retracting eyelids often. Seek medical attention.

Skin Contact:

Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. If irritation persists, consult a physician.

Inhalation:

If symptoms of irritation or discomfort are experienced, or victim is overcome by exposure, remove affected person to fresh air. Give oxygen or artificial respiration as needed.

Ingestion:

If conscious, drink three to four 8 ounce glasses of water or milk. Call a physician. If unconscious, immediately take affected person to a hospital. Do not give anything by mouth to an unconscious person.

Section 5 - Fire Fighting Measures

Flash Point: Not Flammable

Lower Explosive Limit: Not Applicable

Upper Explosive Limit: Not Applicable

Autoignition Temperature: Not Applicable

Extinguishing Media: Water (spray or fog), foam, dry chemical or carbon dioxide (CO2).

Unusual Fire Hazards:

Fluoropolymers will degrade upon prolonged heating or in a fire, liberating carbonyl fluoride and hydrogen fluoride (HF). Decomposition products are toxic if inhaled or they come into contact with moist skin. HF has an ACGIH TLV ceiling limit of 3 ppm (2.6 mg/m³) and an OSHA PEL TWA of 3 ppm. Carbonyl fluoride has an ACGIH TLV TWA and OSHA PEL TWA of 2 ppm (5 mg/m³).

Fire Fighting Procedures:

Use self contained breathing apparatus (SCBA) and skin protection for acid gas exposure. Do not enter fire area without proper protection. Fight fire from safe distance. If possible, air monitoring should be performed.

Section 6 - Accidental Release Measures

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Releases:

In case of a release or spill, absorb material onto vermiculite or similar inert absorbent. Place spilled material into a covered container for disposal. Dispose of according to applicable local, state and federal regulations.

Extinguish all ignition sources and evacuate the area. Exercise caution - spill area may be extremely slippery. Only personnel equipped with eye protection should be allowed in the area.

Section 7 - Handling and Storage

Wash hands after use and before handling food or applying cosmetics. Do not use tobacco products in the immediate area. Keep containers closed. Keep away from heat, sparks and flames. Do not store near combustible materials.

Section 8 - Exposure Controls/Personal Protection

ACGIH Threshold Limit Value (8hr. time weighted average)

Ammonium Perfluorooctanoate TLV/TWA-8hr 0.01 mg/m³ air, A3 skin notation

OSHA Permissible Exposure Limit Value (8hr. time weighted average)

None established

Engineering Controls:

Ventilation Requirements:

Local Exhaust: Vent vapors from melt processing away from operating personnel. Local exhaust ventilation at a rate of 50 feet per minute.

Personal Protective Equipment:

Respiratory Protection:

No occupational exposure standards have been developed for this material. In situations where exposure to vapors or mists is likely, NIOSH/MSHA approved respirators are recommended. Respirator use limitations made by NIOSH/MSHA or the manufacturer must be observed. Respiratory protection programs must be in accordance with 29 CFR 1910.134.

Eye Protection:

Eye/Face Protection: ANSI Z87.1 approved safety glasses with side shields or equivalent. Safety goggles where there is a potential for splashing or contact with liquid material.

Skin Protection:

Nitrile gloves where there is a potential for splashing or contact with liquid material.

Section 9 - Physical and Chemical Properties

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Appearance: Liquid
Color: Grayish-white
Odor: Essentially odorless
Vapor Pressure: Not available
Vapor Density (Air=1): Not available
Boiling Point: 100 C/212 F (estimate, water)
Melting Point: 0 C/32 F (estimate, water)
Specific Gravity: 1.45
pH: Greater than 9
Solubility in Water: Dispersion
Molecular Formula: Mixture
Molecular Weight: Not applicable
% Volatile by Volume: 35-38

Section 10 - Stability and Reactivity

Stability:

This product is stable.

Reactivity:

This product is not reactive.

Conditions to Avoid:

Heat, sparks, flames, and other ignition sources.

Hazardous Decomposition Products:

Thermal decomposition of the polymer (at temperatures above 350 C/662 F) will generate hydrogen fluoride (HF), which is corrosive, causing burns on contact with skin and other tissue.

Incompatibility (Materials to Avoid):

Alkali metals and halogenated compounds.

Section 11 - Toxicological Information

Health injuries are not known or expected under normal use. Component surfactants may be absorbed by the skin and may be harmful by ingestion.

Ammonium Perfluorooctanoate:

LD50 oral - rat 536 mg/kg

Carcinogenicity - ACGIH A3

Non ionic surfactant

LD 50 oral - rat 1800 mg/kg

Polymer pyrolysis products (at 625 C/1157 F):

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Rat 5 minute LC50: 2700 mg/m³
Rat 30 minute LC50: 3500 mg/m³

Breathing fumes generated during processing of the polymeric substance at temperatures ranging from 315 to 375 C (599 to 707 F) can cause an influenza-like disorder called "polymer fume fever". Symptoms include chills, headache, nausea, breathing discomfort, weakness, cough, sore throat, and tightness in the chest. The symptoms generally disappear within 24 to 48 hours. The specific chemicals in the fume which cause polymer fume fever are not known. A common cause of polymer fume fever is smoking tobacco contaminated with minute amounts of polytetrafluoroethylene (PTFE). In one experiment, volunteers developed a fever after smoking a single cigarette contaminated with less than 1 mg of PTFE. Above 400 C, the quantity of fumes and their toxicity increase. Hydrogen fluoride and other toxic fluorinated compounds are produced. Serious lung damage (inflammation of the lungs) may occur in severe cases, but recovery is normally complete. No fatalities from inhalation of PTFE fumes have been reported; no cases of polymer fume fever from overheating of finished PTFE products have been reported.

This product may contain small amounts of residual tetrafluoroethylene (TFE) monomer that can be released during processing. TFE has been shown to cause liver and kidney cancer in laboratory animals in a test conducted by the National Toxicology Program (NTP). It is also listed by the state of California under Proposition 65 as a carcinogen.

Exposures to TFE can occur in handling newly opened drums and in situations where processing temperatures exceed manufacturer's recommendations. Avoid breathing fumes and gases produced in processing or burning of fluoropolymer containing parts. To minimize exposures to trace levels of TFE, follow the handling instructions in Section 8 of the MSDS. For additional information, consult the current edition of the guide to the Safe Handling of Fluoropolymers published by the Society of Plastics Industry, Inc. (SPI) Fluoropolymer Division.

Section 12 - Ecotoxicological Information

No ecotoxicological information is available for this material.

Section 13 - Disposal Considerations

Waste Disposal: Material, as supplied, is not a hazardous waste according to RCRA. Landfill according to current federal, state and local regulations, or incinerate in a high-temperature incinerator designed to burn fluorine-containing materials. Processing, use or contamination may make this information inaccurate or incomplete.

Section 14 - Transportation information

Shipping Class: Not regulated by DOT.

Section 15 - Regulatory information

All components of this product are listed on the Toxic Substances Control Act (TSCA) Section 8(b) Chemical Inventory and the Canadian Environmental Protection Act (CEPA) provisional domestic

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substances list (DSL). This product is not a "hazardous substance" as defined by OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is not a "controlled product" as defined by the Canadian Workplace Hazardous Materials Information System (WHMIS).

SARA 313 Toxic Chemicals: Components not listed

SARA 311/312:

Acute: No

Chronic: No

Fire: No

Reactivity: No

Sudden Release of Pressure: No

SARA 302 Extremely Hazardous Substances: Components not listed

Polytetrafluoroethylene is listed on the Pennsylvania Hazardous Substance List.

Section 16 - Additional Information

NFPA Ratings (Scale of 0-4):

Health=1

Fire=0

Reactivity=0

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