Material Safety Data Sheet

Issued Mar-01-1991 Revised (5.1) Jul-07-2004

Section1: Chemical Product / Company Identification

Trade name	**NEOFLON $_{TM}$ PFA AP series**
Grade	AP-201, AP-202, AP-210, AP-211, AP-220, AP-230, AP-231, AP-221F, AP-231F AP-201SH, AP-210SH, AP-211SH, AP-215SH, AP-221SH, AP-230SH, AP-231SH, AP-230N, AP-230M
Synonym	Tetrafluoroethylene – Perfluorovinylether Copolymer (PFA)

Company identification

Manufacturer	DAIKIN INDUSTRIES, LTD.CHEMICAL DIVISION: Umeda Center Bldg., 4-12, Nakazaki-Nishi2-chome, Kita-Ku, Osaka, JAPAN Phone: (+81) 6-6373-4349 Fax: (+81) 6-6373-4389
Supplier in EU	DAIKIN CHEMICAL EUROPE GmbH ImmermannStr.65 d,40210 Düsseldorf, GERMANY Phone: (+49) 211-1640-834. Fax: (+49) 211-1640-734,
Supplier in US	DAIKIN AMERICA,INC. 20 Olympic Drive, Orangeburg, New York 10962 Phone: +1-800-365-9570
Emergency telephone Company	+81-6-6373-4349, +49-211-179 225 0, +1-845-365-9500

Section 2: Composition / information on ingredients

Component	mass %	CAS RN	Symbol	R-phrases
	100	26655-00-5	-	-

Section 3: Hazard identification

EMERGENCY OVERVIEW

Skin Burns from contact with molten material. Signs/symptoms may include burning pain, red and swollen skin, and blisters.

Harmful if thermal decomposition products are inhaled. Normally inhalation problems should not be expected.

Potential Health Effects

Inhalation	Vapors and fumes liberated during hot processing with this material may cause flu-like symptoms (chills, fever and, sometimes, cough) that may not occur until several hours after exposure and typically pass within about 36 to 48 hours.
Eye	Normally low irritation to the eyes is expected.
Skin	Low-irritating to skin.
Ingestion	Small amounts (tablespoon full) swallowed during normal handling operation are not likely to cause injury. Swallowing larger than that may cause injury.
Chronic	-

SECTION 4: First aid measures

Inhalation	When thermal decomposition occur, fresh air. rest. Get medical aid.
Skin Contact	Rinse and then wash skin with water and soap. If skin contact with hot material occurs: DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Immediately flush affected area with plenty of cold water and cover with a clean dressing. Have burn treated by a physician.
Eyes Contact	First rinse with plenty of water for 15 minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Rinse mouth. Get medical attention.

SECTION 5: Fire-fighting measures

General Information	Non-flammable. Wear self-contained breathing apparatus (SCBA) and full protective gear. Use water spray to cool fire exposed containers. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Extinguishing Media	Water Spray, Powder, alcohol-resistant foam, carbon dioxide.
WARNING:	Combustion products are harmful CO, CO_2, halogenated compounds (ex. HF, COF_2, PFIB or monomer). TOXIC FLUORINE COMPOUNDS EVOLVED IN FIRE.

SECTION 6: Accidental release measures

General Information	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks	Collect spilled material and separate from other waste.

SECTION 7: Handling and storage

Handling	Close containers after each use. Exposure to toxic gases through inhalation can occur if smoking tobacco becomes contaminated by this material. Therefore, do not smoke in the work areas and wash hands and face after handling in order to avoid transfer of the material onto smoking tobacco.
Storage	Keep away from heat, steam or sunlight. Store in a tightly closed container.

SECTION 8: Exposure controls / personal protection

Engineering Controls	Use local exhaust ventilation facilities. When molding or curing. If user operations generate fume, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protective Equipment:

Eyes	Wear safety glasses with side shields.
Skin	Wear appropriate gloves, when handling this material to prevent thermal burns.
Clothing	Wear protective clothing and boots as required
Respirators	If thermal decomposition occurs, Mask for acidic gases must be used to avoid inhalation of the product.

Exposure Guidelines:

HF	TLV: (as F): 3ppm; (ceiling values)(ACGIH 1999) MAK: 3ppm; 2.5mg/m^3, BAT 7mg/g creatinine (1999) MAK as STEL: 6ppm, 5mg/m^3 (1999)
COF_2	TLV: 2ppm; 5.4mg/m^3 (as TWA); 5ppm; 13mg/m^3 (as STEL) (ACGIH 1997)
PFIB	TLV: 0.01ppm; 0.082 mg/m^3 (ceiling values) (ACGIH 1993-1994).

SECTION 9: Physical and chemical properties

Physical State	solid
Appearance	semi-translucent, white powder
Odor	no
Melting point	300-310 C
Apparent density	2.12-2.17 (H_2O=1 at 23 C)
Solubility in water	insoluble
Autoignition Temp.	NA
Flash Point	NA
Explosion Limits	
lower	NA
upper	NA

SECTION 10: Stability and reactivity

Chemical Stability	Stable under normal temperatures and pressures.
Conditions to Avoid	Ignition sources, excess heat.
Incompatibility	Finely divided metallic powder or filler
Decomposition Products	Carbon monoxide, carbon dioxide, HF, COF_2 and PFIB

SECTION 11: Toxicological information

When heated for a long time, a very small quantity of hydrogen fluoride (HF), carbonyl fluoride(COF_2) Perfluoroisobutylene (PFIB) is generated. Further the higher temperature, the larger it will increase. Follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

(as HF or COF_2)

Burning sensation. Cough. Dizziness. Headache. Laboured breathing. Nausea. Shortness of breath. Sore throat. Vomiting. Symptoms may be delayed.
Inhalation of this gas or vapour may cause lung oedema.

(as PFIB)

The substance irritates the respiratory tract. Inhalation of this gas may cause lung oedema. Exposure may result in death. The effects may be delayed. Medical observation is indicated.

SECTION 12: Ecological information

Exotoxicity is expected to be low based on the near zero water solubility of the polymer. Material is considered inert and not expected to be biodegradable or toxic.

SECTION 13: Disposal considerations

Dispose of in compliance with Federal, state and local government regulations.
Usually considered an inert packaging material that can be recycled or landfilled.
Incineration is not a preferred disposal method because of the possible formation of hydrogen fluoride.

SECTION 14: Transport information

Hazard Class	not regulated
UN Number	not applicable, none assigned
Packing Group	-

SECTION 15: Regulatory information

European Labeling in Accordance with EC Directives

Hazard Symbols	none
Risk Phrases	none
Safety Phrases	none

SECTION 16: Other information

TSCA Chemical Inventory	listed
Canadian DSL Inventory	listed
Australian Inventory	listed
Korea Inventory of Chemicals	listed
Philippine Inventory (PICCS)	listed
Japan (ENCS)	6-944
EINECS Number	2041269 and 2166002

"Guide to the safe handling of Fluoropolymer resins, 3rd edition"
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