



Material Safety Data Sheet (MSDS)

Issue/Revision Date: 27 October 2011

Section 1. Product and Company Information

Chemical (Product)

Name: Porous PTFE Filter Membrane Products
Synonym(s): Polytetrafluoroethylene, PTFE, polytetrafluoroethene
Product Use: Ambient air filtration
Catalog No.: 225-1700 and -2700 Series

Company: SKC Omega Specialty Division
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Section 2. Composition/Information on Ingredient(s)

Chemical Name	Formula	CAS #	Weight
Polytetrafluoroethylene (PTFE) polymer	(C ₂ F ₄) _n	9002-84-0	99%

Section 3. Hazards Identification

This product as supplied is not considered hazardous as defined in the U.S. Code of Federal Regulations, 29CFR 1910.1200. This product is considered an "article" as supplied for its intended and foreseen use (see Section 1).

All components appear on TSCA Inventory. This product contains no substances at or above the reporting threshold under Section 313 of Title III of the U.S. EPA Superfund Amendments and Reauthorization Act of 1986 and U.S. Code of Federal Regulations, 40CFR part 372, based on available data.

Emergency Overview

No special dangers are known. Use within specified processing parameters. High temperatures could evolve irritating and/or toxic fumes.

Potential Health Hazards

Skin: Not anticipated under recommended usage conditions

Eyes: Not anticipated under recommended usage conditions; dust may cause eye irritation

Inhalation: Not anticipated under recommended usage conditions; if heated, may cause irritation

Ingestion: Not anticipated under recommended usage conditions; may cause nausea, vomiting, and diarrhea

Ingredients Found on one of the OSHA Designated Carcinogen Lists

None

Section 4. First Aid Measures

Skin

Not anticipated under recommended usage conditions. For contact with hot product, immediately immerse in or flush affected area with large amounts of cold water for at least 15 minutes. Cover with clean cotton sheeting or gauze and seek medical advice.

Eyes

Not anticipated under recommended usage conditions. If there is irritation, flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

Inhalation

Not anticipated under recommended usage conditions. May cause influenza-like symptoms if thermal decomposition products are inhaled ("polymer fume-fever") including chills, fever, headache, shortness of breath, and/or coughing. Avoid contamination of tobacco products. Remove victim to fresh air. If not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion

Not anticipated under recommended usage conditions. If a large amount is swallowed, seek medical attention.

Advice to Physician

Expect the following influenza-like symptoms if thermal decomposition products are inhaled: chills, fever, headache, shortness of breath, and/or coughing. This is known as "polymer fume-fever" and will pass after 24 to 48 hours providing no further exposure occurs.

Section 5. Fire Fighting Measures

Flammable Properties

Flash Point:	Does not flash
Flash Point Method:	N/A
Auto Ignition Temperature:	Not known
Upper Flame Limit (volume % in air):	N/A
Lower Flame Limit (volume % in air):	N/A
Oxygen Index:	> 95%
Extinguishing Media:	Water, foam, carbon dioxide, dry chemical
Unusual Fire and Explosive Hazards:	Does not burn without external source of fuel. Fluoropolymers can increase the relative toxic properties of the gases evolved during a fire.

Special Fire Fighting Precautions/Instructions

Use self-contained breathing apparatus.

Section 6. Accidental Release Measures

In Case of Spills or Other Release

Collect spilled material in appropriate container for disposal.

Section 7. Handling and Storage

Normal Handling

Product is physiologically inert and non-toxic at normal temperatures.

Above 250 C, some decomposition of PTFE products can be expected with evolution of gaseous and particulate products, which are toxic if inhaled. This can give rise to a characteristic syndrome with influenza-type symptoms known as "polymer fume-fever." These symptoms subside within 24 to 48 hours away from further exposure with no long-term effects. Keep away from ignition sources. Do not smoke while using fluoropolymers.

Storage Recommendations

No special requirements

Section 8. Exposure Controls/Personal Protective Equipment (PPE)

Ventilation

Ensure good ventilation or exhaust if there is the possibility of fumes being evolved. Not required if material is used within specified usage parameters.

Fire and Explosion

Not applicable

Personal Protective Equipment

None required if material is used within specified usage parameters. Normal safety equipment should always be used in an industrial environment.

Additional Recommendations

Heat-resistant clothing and skin covering when working with hot product. Do not smoke while handling material. Keep tobacco products away from sources of contamination: hands and clothes.

Exposure Guidelines/Limits:

Exposure Limits			
Chemical Name	OSHA PEL ppm mg/m ³	ACGIH® TLV® ppm mg/m ³ [1]	ICI DCL ppm mg/m ³ [1]
Polytetrafluoroethylene	TWA	10	10

OSHA Table Comments

[1] PNOC Inhalable (Respirable 3 mg/m³)

Engineering Controls

Provide local exhaust to control large quantities of dust. All heated processing equipment must be vented safely to prevent the inhalation of thermal decomposition products.

Other Exposure Limits for Potential Decomposition Products

Not available

Section 9. Physical/Chemical Properties

Appearance

Color: White translucent to opaque

Form: Film

Chemical Properties

Property	Value
Physical State	Solid
Odor	Odorless
Specific Gravity (H ₂ O = 1)	2.13 to 2.20
Solubility in Water (weight %)	Insoluble
PH	Not applicable
Boiling Point	Not applicable
Melting Point	Approximately 327 C
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Evaporation Rate	Not applicable
% Volatiles	Not applicable
Ignition Temperature	> 500 C
Flash Point	Does not flash
Thermal Decomposition	See Section 10

Note: No further properties were reported.

Section 10. Stability and Reactivity

Chemical Stability

Stable. Thermal degradation can begin at 250 C.

Incompatibilities/Reacts

Reacts with molten alkali metals, inter-halogen compounds, strong oxidizers, and sodium-potassium alloy. Will burn in atmosphere of 95% oxygen when an ignition source is present.

Hazardous Decomposition Products

Thermal decomposition will evolve hydrofluoric acid, carbonyl fluoride, and other perfluoroolefins.

Hazardous Polymerization

Will not occur

Section 11. Toxicological Information

General

No potential health hazards when used within processing guidelines. Fluoropolymers are physiologically inert and are considered non-toxic.

Immediate (Acute) Effects

See Section 3.

Delayed (Sub-chronic and Chronic) Effects

See Section 3.

Toxicity of Product

Non-toxic when used within recommended guidelines

Other Data

None

Section 12. Ecological Information

No known harmful effects on the environment

Section 13. Disposal Considerations

- Clean material may be recycled.
- Dispose of fluoropolymer material as solid waste according to local regulations.
- Dispose of packaging as solid waste according to local regulations.
- Can be incinerated only if the HF effluent can be extracted from the flue gases

This information relates only to uncontaminated product. If used in a process which contaminates product, then disposal considerations should be re-evaluated in accordance with applicable regulations.

Section 14. Transport Information

DOT Designation: Not hazardous, no classification assigned

UN No.: Not determined

ICAO/IATA: Not hazardous

There are no known transportation requirements associated with this material in the form supplied based on currently available data.

Section 15. Regulatory Information

Toxic Substances Control Act (TSCA)

TSCA Inventory Status: All components are listed on the TSCA Inventory.

Other TSCA Issues: This product is considered an article under TSCA.

SARA Title III/CERCLA: “Reportable Quantities” (RQs) and/or “Threshold Planning Quantities” (TPQs) exist for the following ingredients.

Ingredient Name SARA/CERCLA RQ (lb) SARA EHS TPQ (lb)

No ingredients listed in this section. Spills or a release resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Section 311 Hazard Class: None. The following ingredients are SARA 313 “Toxic Chemicals.” CAS Numbers and weight percentages are found in Section 2.

Ingredient Name Comment

No ingredients listed in this section.

State Right-to-know

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

New Jersey Right-to-know: These products are manufactured from polytetrafluoroethylene (PTFE) raw materials, which may contain TFE (tetrafluoroethylene) residual monomer. TFE is known by the state of New Jersey to cause birth defects or other reproductive harm.

Additional Regulatory Information

California Proposition 65 Statement: These products are manufactured from polytetrafluoroethylene (PTFE) raw materials, which may contain TFE (tetrafluoroethylene) residual monomer. TFE is known by the state of California to cause birth defects or other reproductive harm.

WHMIS Classification (Canada): Not a controlled substance (considered to be a manufactured article)

Foreign Inventory Status: Not determined

Section 16. Other Information

This material safety data sheet was prepared in compliance with U.S. OSHA Hazard Communication Standard 29CFR 1910.1200 and European Council Directives 91/155/EEC, 67/548, and 88/379/EEC, as well as their relevant amendments, on the approximation of laws, regulations, and administrative provisions relative to the classification, packaging, and labeling of dangerous substances and preparations.

The information and recommendations set forth above are taken from sources believed to be accurate as of the date hereof; however, SKC Omega Specialty Division makes no warranty with respect to the accuracy of the information or the suitability of the recommendations and assumes no liability to any user thereof. The information contained in this sheet does not constitute a hazard assessment and should not be used in place of the user’s own assessment of workplace risks as required by other health and safety legislation.

For approved uses only. Not for drug, household, or other uses. See Section 1.

The above information is believed to be correct, but does not purport to be all-inclusive and shall be used only as a guide. SKC Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.