Mitsubishi Chemical Advanced Materials
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SAFETY DATA SHEET

ID# SDS-1408
Issue Date: Sept. 16, 2015
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Revision No. 002

Section 1: Identification

Product Identifier: Fluorosint® PTFE 135

Manufacturer:
Mitsubishi Chemical Advanced Materials, Inc.
2120 Fairmont Ave.
Reading, PA 19605
(610) 320-6600

In case of an emergency, please call Chemtrec 1-800-424-9300.

Recommended Use: Engineering thermoplastic stock shape

Section 2: Hazard Identification

GHS – Classifications

Classification: None

Signal Word: None

Pictograms and Symbols: None

Hazard Statements: None

Precautionary Statements: None

Section 3: Composition/Information on Ingredients

This is a polymeric material. All constituents are encapsulated within the polymer system and therefore present minimal likelihood of exposure under normal conditions of processing and handling.

Chemical Name	CAS No.	Weight %
Polytetrafluoroethylene	9002-84-0	Proprietary
Polyphenylene Sulfide	26125-40-6	Proprietary
Additives		Proprietary

Section 4: First-Aid Measures

Eyes: Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation continues.

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Skin: No health risks concerning skin contact at room temperature. Wash with soap and water. If molten material comes in contact with the skin, cool under running water. Do not attempt to remove the molten material from the skin. Get medical attention immediately.
Inhalation: If fumes from overheating are inhaled, remove to fresh air. Seek medical attention if respiratory symptoms occur or breathing becomes difficult.
Ingestion: Rinse the victim's mouth with plenty of water. Do not induce vomiting. Seek medical attention.

Section 5: Fire-Fighting Measures

Fire-fighters should protect themselves from decomposition and combustion products by using a full-face self-contained breathing apparatus and impervious protective clothing. Extinguish fires with water, foam, carbon dioxide or dry chemical media.

Hazardous gases/vapors produced in fire are: carbon oxides; Hydrocarbon, sulfur oxides, Carbonyl Sulfide, hydrogen fluoride, fluorophosgene, and tetrafluoroethylene. Degradation under vacuum at 450 C / 842 F may yield hydrogen sulfide. Pyrolysis under vacuum at 275 C / 527 F may yield dibenzothiophene.

Dust is flammable and explosive when finely divided and suspended in air.

Section 6: Accidental Release Measures

If a spill occurs, stop the leak at the source and sweep up for disposal. Do not flush to sewers or waterways.

Section 7: Handling and Storage

Precautions for Safe Handling
Personal hygiene such as washing the hands and face immediately after working with this material and before eating is recommended.

Dust may form explosive mixtures with air. Avoid dust formation and control ignition sources. Plastic dust particles suspended in air are combustible and may be explosive. Keep away from heat, sparks, flame, and other ignition sources. Prevent dust accumulations and dust clouds. Employ ground, bonding, venting, and explosive relief provisions in accordance with accepted engineering practices and NFPA provisions in any process capable of generating dust and/or static electricity. Explosion hazards apply only to dusts, not granular forms of this product.

The handling of powder in both loading and unloading operations, as well as fabrication, may cause dust to be formed and necessary precautions for personal protection should be used. As with all finely divided materials precautions should be taken to avoid inhalation and eye contact.

If in dust form, transfer from storage with a minimum amount of dusting. Ground all transfer, blending, and dust collecting equipment to prevent static sparks in accordance with NFPA 70 "National Electric Code." Review and comply with all relevant NFPA provisions, including but not limited to NFPA 484 and NFPA 654 related to combustible dust hazards. Remove all ignition sources from material handling, transfer, and processing areas where dust may be present. Local exhaust ventilation should be provided in work area.

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Precautions for Safe Storage
Store in a sprinkler protected warehouse. Since products are organic they will burn with a hot flame if ignited. Avoid contact with ignition sources such as open flames. Keep a fire extinguisher near if welding is done in the area of organic products. If a heat source is present, keep the area well ventilated.

Section 8: Exposure Controls/Personal Protection

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
Particulates	10 mg/m^3	15 mg/m^3 – Total 5 mg/m^3 – Respirable	Not Determined
Carbon Black	3.5 mg/m^3	3.5 mg/m^3	3.5 mg/m^3
Graphite	2 mg/m^3 - Respirable	15 mppcf - Respirable	2.5 mg/m^3 - Respirable

Engineering Measures:
Provide local exhaust ventilation to keep airborne particulate concentrations below 15 mg/m^3, the OSHA limit for nuisance dusts.

Personal Protective Equipment: Eyes/Face
Safety glasses with side shields.

Personal Protective Equipment: Skin
When handling molten material, protective clothing such as long sleeves or laboratory coat should be worn. Use heat-resistant gloves, boots and face protection.

Personal Protective Equipment: Respiratory
If levels are above published OELs, then a NIOSH approved respirator.

Good industrial hygiene practice should be followed which includes preventing eye contact, minimizing skin contact and minimizing inhalation of dust, vapors or mist.

Section 9: Physical and Chemical Properties

Appearance and Odor	Solid in rod or plate form with essentially no odor
Odor Threshold	No Information Available
Specific Gravity (Relative Density)	No data available
Solubility in Water	Insoluble
VOC Content (%)	<1%
pH	No data available
Melting Point/Freezing Point	545-572° F
Vapor Pressure	No data available
Vapor Density	No data available
Evaporation Rate	No data available
Boiling Point	No data available
Flammability	Combustible
Flash Point	No data available
Explosion Data	LEL – No data available UEL – No data available
Auto ignition Point	No data available
Partition Coefficient: n-octanol/water	No data available
Decomposition Temperature	626° F

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Viscosity	No data available

Section 10: Stability and Reactivity

Reactivity:
None known

Chemical Stability:
Material is stable under normal industrial conditions and is not susceptible to hazardous polymerization.

Conditions to Avoid:
To avoid thermal decomposition, avoid elevated temperatures. Heating can result in the formation of gaseous decomposition products, some of which may be hazardous.

Incompatibility:
None known.

Hazardous Decomposition Products:
At elevated temperatures Carbon oxides, Sulpher oxides, Hydrocarbons, Hydrogen fluoride, Fluorophosgen, tetrafluorethylene, Hexafluoropropene, Perfluoroisobutene, Carbonyl Sulfide will occur.

Section 11: Toxicological Information

Polytetrafluoroethylene (PTFE)
Inhalation of PTFE dust may cause generalized irritation of the nose, throat and lungs with cough, difficulty breathing or shortness of breath.

Heating PTFE above 300 degrees C may liberate a fine particulate fume. Inhalation may produce polymer fume fever, a temporary flu-like condition with fever, chills, nausea, shortness of breath, chest tightness, muscle or joint ache, and sometimes cough and elevated white blood cell count. The symptoms are often delayed 4 to 24 hours after exposure. These signs are generally temporary, lasting 24-48 hours and resolve without further complications. However, some individuals with repeated episodes of polymer fume fever have reported persistent pulmonary effects. Protection against polymer fume fever should also provide protection against any potential chronic effects.

Exposure to decomposition products from PTFE heated above 400 degrees C may cause pulmonary inflammation, hemorrhage or edema. These more serious consequences of exposure may occur from extreme thermal decomposition of PTFE which can liberate fume particles, and toxic gases (carbonyl fluoride, hydrogen fluoride, and other fluorinated gases) especially under conditions of poor ventilation and/or confined spaces. These decomposition products may initially produce chest tightness or pain, chills, fever, nausea, with shortness of breath, cough wheezing and progression into pulmonary edema. Edema may be delayed in onset and requires medical treatment. In severe cases, if medical intervention is delayed, pulmonary edema may become life threatening. Recovery is generally complete within a few days; in some rare cases, persistent lung function abnormalities have been reported.

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Compared to nonsmokers, polymer fume fever symptoms appear to be more prevalent and serious in smokers. Smokers must avoid contamination of tobacco with residual polymer from their hands or from fumes, and should wash their hands before smoking.

Signs and Symptoms of Overexposure: Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Skin irritation signs and symptoms may include a burning sensation, redness and swelling. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

Aggravated Medical: None.

Acute Effects: No data available**.**
Skin Corrosion/Irritation: No data available.
Serious Eye Damage/Irritation: No data available.
Ingestion: No data available.
Inhalation: No data available.
Respiratory or Skin Sensitization: No data available.

Chronic Effects:

Germ Cell Mutagenicity: No data available.
Carcinogenicity: No data available
Reproductive Toxicity: No data available.
STOT-single Exposure: No data available.
STOT –multiple Exposure: No data available.
Aspiration Hazard: No data available. Not expected to be an aspiration hazard.

Primary Route of Entry: Inhalation of particulates.

Section 12: Ecological Information

Ecotoxicity:
There aren't known ecological toxicity values.

Persistence and degradability:
It's expected high persistence and slow degradability.

Bioaccumulative Potential:
It's expected moderate to high bioaccumulative potential.

Mobility in Soil:
No data available

Other Adverse Effects:
No data available

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)

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Section 13: Disposal Considerations

Dispose of in accordance with federal, state and local regulations.

Section 14: Transportation Information

US Department of Transportation Classification (49CFR)

Not classified as hazardous for transport.

Section 15: Regulatory Information

SARA Section 302 & 304:
No chemicals

SARA Section 313:
The following component is subject to reporting levls established by SARA Title III, Section 313:

- None

TSCA:
All components of this product are either listed or are exempt on the TSCA inventory.

Section 16: Other Information

Label Information

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Revision Date	Reason for Revision
June 1, 2015	SDS format
September 7, 2018	Three year review
October 22, 2019	Name change to MCAM

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