Fluorilon

SDS

Fluorilon 99W is a stable white thermoplastic with extremely high diffuse reflectance. The material is both thermally (>300°C), physically, and chemically stable to all but the most hostile environments. The sintered PTFE product has been employed in a number of applications as a calibration target. The primary use is as a component in reflective optical systems where the highest diffuse reflectance possible is required.

Properties:

- Greater than 99% reflectance in the 400-800nm range
- Reflectance of >97% over the 300-2200nm range
- Reflectance of >92% over the 200-2500nm range
- Easily machined into diffusely reflective components
- Hydrophobic
- Chemically inert
- Thermally stable to 300°C
- Durable and cleanable

Physical Properties
Density: 1.5-1.6g/cc
Porosity: 40-50%
Pore Size: Typically 25-35 microns
Decomposition Point: about 400°C
Toxicity: GRAS (non-toxic, same toxicity as Teflon)

Avian Technologies LLC
116 Newport Road, The Carriage House
New London NH 03257
PO Box 716, Sunapee NH 03782
603-526-2420 (P); 603-526-2729 (F)
www.aviantechnologies.com

Safety Data Sheet
Revision #2: 10/13/22
Fluorilon FW99

For **Emergency**, Health, Safety and Environmental Information, call 1-800-424-9300 in the United States and 613-996-6666 in Canada. International: Call 1-703-527-3887. For all other purposes, call 603-526-2420.

SECTION I PRODUCT IDENTIFICATION

Product Name:	Fluorilon
DOT Shipping Name:	Same
DOT Hazard Class:	Not a hazardous material per CFR49 172.101
Hazard Rating:	Health: 1; Flammability: 0; Reactivity: 0
Protective Equipment:	Safety Glasses, Gloves, Ventilation
Precautionary Label:	Avoid breathing dust; Avoid contamination with cigarettes or tobacco

SECTION II HAZARDS INDENTIFICATION

Emergency Overview: As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes, and clothing.

Substance	Polytetrafluoroethylene (PTFE)
Health Rating	1-Slight Associated with dust
Flammability Rating	0-None
Reactivity Rating	0-None
Contact Rating	0-None
Lab Protective Equipment	Goggles, Lab Coat, Proper Gloves
Storage Color Code	Green (General)

Potential Health Effects

Substance	Polytetrafluoroethylene (PTFE)
Inhalation	Not expected to be a health hazard
Ingestion	Not expected to be a health hazard.
Skin Contact	No adverse effects expected
Eye Contact	No adverse effects expected.
Chronic Exposure	None noted
Aggravation of Pre-existing conditions	No information found.

SECTION III COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Occ. Exp. Limit	Pv (mmHg)	Hazardous
PTFE	9002-84-0	n/a	n/a	No

PHYSICAL DATA
Appearance: White odorless solid
Boiling Point: Not applicable
Melting Point: 684°F (no flow)
Percent volatiles by volume: Not applicable
Evaporation Rate: Information not available
Water solubility: Not soluble
Flash Point: Not applicable
Auto Ignition Temperature: Information not available

SECTION IV FIRST AID MEASURES
Inhalation of dust: Remove to fresh air. Get medical attention for any breathing difficulty. Treat symptomatically.
Ingestion: No specific intervention is noted as material is not likely to be hazardous. Consult physician if necessary.
Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.
Eye Contact: Wash thoroughly with running water. Get medical advice if irritation develops.

SECTION V FIRE FIGHTING MEASURES
Not a fire or explosion hazard. Does not burn without external flame. Heating above 750°F may result in evolution of hydrogen fluoride and carbonyl fluoride, which can be hazardous. The use of self contained breathing apparatus and protective clothing is recommended. Wear neoprene gloves when handling refuse from a fire. If molten polymer gets on skin, cool rapidly with cool water. Do not attempt to peel polymer from skin. Obtain medical attention for thermal burn. USE water with caution. Extinguishing media: Foam, Carbon dioxide, Dry chemical extinguishers
Flash Point: Does not flash

SECTION VI: ACCIDENTAL RELEASE MEASURES
Review general clean up procedures. Sweep up to avian slipping hazard. Dispose of material in accordance with applicable local, county, state, and federal regulations. Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products.

SECTION VII: HANDLING AND STORAGE
Containers should be kept closed to avoid contamination.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION
Good general room ventilation should be used. A NIOSH approved respirator may provide protection form airborne particulates is local exhaust ventilation is inadequate. At higher processing temperature (>750°F) ventilation is required to lower concentrations of hydrogen fluoride and carbonyl fluoride by-products.

SECTION 1X PHYSICAL AND CHEMICAL PROPERTIES
Appearance: White odorless solid resin
Solubility: Not soluble in water.
Boiling Point: Not applicable
Vapor Density: No information found.
Vapor Pressure: No information found.
Evaporation Rate: No information found.

SECTION X STABILITY AND REACTIVITY
Stability: Stable
Hazardous Decomposition Products: Heating above the melting point or prolonged heating above 750° F.
Incompatibilities: Organolithium, organosodiums, alkali metals
Conditions to avoid: Atmosphere of 95% oxygen when an ignition source is present.

SECTION XI TOXICOLOGICAL INFORMATION

Material	PTFE
LD50/LC50	No information found related to normal routes of occupational exposure
NTP Carcinogen	Known: No Anticipated: No
IARC Category	None

SECTION XII ECOLOGICAL INFORMATION
Ecological Fate: None found.
Environmental Toxicity: None found.
Should not be released into the environment. Prevent product from entering drains.

SECTION XIII DISPOSAL CONSIDERATIONS
Dispose of container and unused contents in accordance with federal, state, and local requirements.

SECTION XIV TRANSPORTATION INFORMATION
Not regulated

SECTION XV REGULATORY INFORMATION
Ingredient
Polytetrafluoroethylene (PTFE)
Reactivity: No
No poison number allocated.

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION XVI OTHER INFORMATION
As part of good industrial and personal hygiene and safety procedures, avoid all unnecessary exposure to the chemical substance and ensure proper removal from skin, eyes, and clothing.
Label Precautions: None
Label First Aid: None

Revision Information: October 13, 2022 Reviewed for current information.
Disclaimer:
Avian Technologies LLC provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. Avian Technologies LLC makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Avian Technologies LLC will not be responsible for damages resulting from use of or reliance upon this information.

Avian Technologies LLC
PO Box 716
Sunapee NH 03782
Physical Location: 116 Newport Road, Carriage House, New London NH 03257
603-526-2420 (P); 603-526-2729 (F)
E-mail: info@aviantechnologies.com
www.aviantechnologies.com