
SAFETY DATA SHEET

SECTION 1 - Identification:

PRODUCT NAME: Polyfluo 523AL

SDS NUMBER: PF-523AL

MANUFACTURER'S NAME: Micro Powders
ADDRESS: 580 White Plains Road
Tarrytown, NY 10591

CHEMTREC PHONE: 800-424-9300
INFORMATION PHONE: 914-793-4058

SDS DATE: 11/6/2025
PREPARED BY: EH&S Group

INTENDED USE: Wax additive

SECTION 2 - Hazard identification:

CLASSIFICATION:

OSHA 29CFR 1910.1200
Combustible dust

REGULATION (EC) No 1272/2008
Not a hazardous substance or mixture

LABEL ELEMENTS:

OSHA 29CFR 1910.1200
WARNING – May form combustible dust concentrations in the air

REGULATION (EC) No 1272/2008
Not a hazardous substance or mixture

EMERGENCY OVERVIEW

These products are micronized powders. Static charges on the powders may ignite flammable atmospheres. High levels of product dust in the atmosphere may present a dust explosion hazard.

(See Dust Hazard Reference in Section 16.)

SECTION 3 - Composition/information on ingredients:

Wax modified PTFE
Aluminum Oxide

SECTION 4 - First-aid measures:

IF IN EYES: Immediately flush with copious amounts of water for at least 20 minutes.

IF ON SKIN: Remove contaminated clothing. Wash skin thoroughly with soap and water.

IF INHALED: Treat as a nuisance dust. Remove victim to fresh air and provide oxygen if breathing is difficult. Immediate medical attention not normally required. No delayed effects expected.

IF INGESTED: Do not induce vomiting; aspiration hazard. Dilute with 1-2 glasses of water. Get medical aid. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs.

SECTION 5 - Fire-fighting measures:

OSHA FLAMMABILITY CLASS: Combustible solid.

SUITABLE EXTINGUISHING MEDIA: Carbon Dioxide, dry chemical or fine water spray. Avoid water stream on molten burning material as it may scatter and spread the fire.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing approved by NIOSH. Watch footing on floors and stairs because of possible melting and spreading of material. Use spray to keep containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flash point >450 F 232 C. Melts in proximity to fires, causing slippery floors and stairs. When powder is suspended in air, these products could be FLAMMABLE/EXPLOSIVE. In these circumstances, keep away from heat, sparks and open flames. Static charges on powders or powders in liquids may ignite flammable atmospheres. See Section 7 "HANDLING AND STORAGE" for suggestions on how to use these products under such conditions. Also refer to NFPA Bulletin 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries", for safe handling procedures.

HAZARDOUS DECOMPOSITION PRODUCTS AND/OR BY PRODUCTS:

These products may emit hydrogen fluoride, tetrafluoroethylene > 800° F, hexafluoropropylene > 825° F, perfluoroisobutylene > 885° F, carbonyl fluoride > 930° F.

Chronic exposure may be fatal. Exposure to fumes that are generated during processing of polytetrafluoroethylene can cause an influenza-like condition which is sometimes called "polymer fume fever" are chills, fever, chest pains, shortness of breath and coughing. These symptoms do not necessarily occur at the time of exposure, but may require several hours to develop. The symptoms usually pass in 48 to 72 hours. The inhalation of smoke from tobacco that is contaminated with fluoropolymers can cause polymer fume fever.

Advice for firefighters

- Wear self-contained breathing apparatus and protective suit.
- When intervention in close proximity wear acid resistant over suit.
- Evacuate personnel to safe areas.
- Approach from upwind.
- Protect intervention team with a water spray as they approach the fire.
- Keep containers and surroundings cool with water spray.
- Keep product and empty container away from heat and sources of ignition.

SECTION 6 - Accidental release measures:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear recommended personal protective equipment. Remove ignition sources. Sweep up with a minimum of dusting. Keep away from heat or flame. Collect in containers (e.g. fiberboard drums or cartons). If hot liquid, attempt to confine spill and let the polymer solidify. Once solid, it may be recovered as the powder. Report major leaks and spills to the appropriate local, state and federal government agencies.

HAZARD WARNING

These products are micronized powders. Static charges on the powders may ignite flammable atmospheres. High levels of product dust in the atmosphere may present a dust explosion hazard.

(See Dust Hazard Reference in Section 16. Read Section 7.)

See the Regulatory Information (Section 15) regarding reporting requirements.

SECTION 7 - Handling and storage:

SPECIAL HANDLING AND STORAGE: (Always wear recommended personal protective equipment.) Avoid breathing fumes from heating operations. Avoid spillage which can cause very slippery conditions on floors. Use good personal hygiene and housekeeping.

STATIC ELECTRICITY AND FINE PARTICLE SIZE WAXES

Electrostatic charges of non-conductive materials is a natural phenomenon ranging from harmless to a nuisance to a hazard, depending on the degree of charging and the environment where the discharge takes place. In the case of micronized polymers and waxes, very high levels of static electricity develop in their manufacture, transportation and handling. These products, being poor conductors of electricity, can and will hold a static charge for long periods of time. With this in mind, a great deal of care should be exercised when handling this type of product in or around flammable liquids, particularly if the liquid is at or near its flashpoint. The generation of static electricity cannot be prevented because its intrinsic origins are present at every particle interface. Some common sense approaches to the hazards involved with static electricity are as follows:

- Use only conductive equipment and keep all components grounded and bonded to the same vessel in order to equalize any potential charge.
- Avoid projections and probes that could lead to discharge between the charged polymer and probe.
- Avoid a flammable condition by the use of inert gases in the container or by providing sufficient exhaust so as to prevent a buildup of flammable solvent vapors.
- Never pour micronized polymers or waxes from a drum or large container directly into hot flammable solvents.
- Add micronized polymers or waxes slowly and in small quantities to hot flammable solvents.
- If possible, do not permit the product to free fall directly into the solvent. Ideally, use a pipe or chute that leads down to the level of the solvent. Make sure the pipe or chute is grounded and bonded.
- If mechanical equipment must be used, a slow-turning screw feeder that is grounded and is preferred.
- Good housekeeping is of prime importance. The building and equipment should be designed to eliminate shelves and ledges and similar places where materials can accumulate.

The above are only suggestions and should not be taken as recommended practices in your establishment and in no way should be considered as comprehensive engineering controls. A more detailed discussion and recommended practices can be found in NFPA 77 issued by the National Fire Protection Association Inc. in 1988.

STORAGE RECOMMENDATIONS:

Store under ambient conditions. Avoid excessive heat. Do not store near strong oxidizing agents and amines.

SECTION 8 - Exposure controls/personal protection:

ENGINEERING CONTROLS: Use adequate ventilation during heating processes or if dusty conditions prevail when handling powdered materials. For storage and ordinary handling, general ventilation is adequate.

RESPIRATORY PROTECTION: Use a NIOSH approved dust respirator with powdered wax. During melting or conveying in molten state, use organic vapor respirator.

VENTILATION: Face velocity greater than 60 cfm (adequate to capture wax dust or fumes).

SKIN PROTECTION: Use heat resistant, impervious gloves to avoid repeated/prolonged skin contact with molten material and powder. Other protective garments as necessary.

EYE PROTECTION: Chemical goggles around molten material and in dusty conditions.

OTHER PROTECTIVE EQUIPMENT OR CLOTHING: As needed to prevent repeated/prolonged contact.

WORK / HYGIENIC PRACTICES: Wash skin thoroughly with soap and warm water after handling and before smoking, eating or applying makeup. If clothes become contaminated, change to clean clothing. Do not wear contaminated clothing until properly laundered. Further information relating to the safe handling and use of fluorocarbon polymers may be found in DWE (NIOSH), Publication No. 77-193.

EXPOSURE GUIDELINES: Powdered forms may generate nuisance particulates upon handling.
ACGIH TLV = 10mg/m³. OSHA PEL 5mg/m³.

SECTION 9 - Physical and chemical properties:

Appearance	: White powder
Odor	: Typical wax odor
Odor threshold	: Not applicable
Melting point	: 113 - 117 °C
Boiling point	: Not applicable
Flash point	: >450 F 232 C COC
Evaporation rate	: Not applicable
Flammability	: Combustible solid
Upper/lower flammability limits	: 450°F TOC
Vapor pressure	: Not applicable
Vapor density	: Heavier than air
Relative density	: 1.09 g/cc
Solubility	: Not applicable
Partition coefficient	: Unknown
Auto-ignition temperature	: Unknown
Decomposition temperature	: Unknown
Explosive properties	: Not applicable
Oxidizing properties	: Not applicable
Volatiles (weight percent)	: Zero

SECTION 10 - Stability and reactivity:

STABILITY: Stable at normal conditions.

CONDITIONS TO AVOID: Extreme heat, sparks and open flame.

INCOMPATABILITY (AVOID CONTACT WITH): Strong oxidizing agents and amines.

HAZARDOUS POLYMERIZATION: Should not occur.

HAZARDOUS DECOMPOSITION PRODUCTS AND/OR BY PRODUCTS:

- Gaseous hydrogen fluoride (HF), Fluorophosgene
- tetrafluoroethylene, Hexafluoropropene, Perfluoroisobutene
- Other hazardous decomposition products may be formed.

SECTION 11 - Toxicological information:

Acute toxicity	: No data developed.
Skin corrosion/irritation	: No data developed. None expected.
Serious eye damage/irritation	: No data developed. Treat as nuisance dust.
Respiratory or skin sensitization	: No data developed. Treat as nuisance dust.
Germ cell mutagenicity	: No data developed.
Carcinogenicity	: N.T.P. CARCINOGEN: No
	: I.A.R.C. CARCINOGEN: No
Reproductive toxicity	: No.
STOST-single exposure	: No data developed. Treat as nuisance dust.
STOST-repeated exposure	: No data developed. Treat as nuisance dust.
Aspiration hazard	: No data developed. Aspiration is possible.

MEDICAL CONDITIONS GENERALLY AGGREGATED BY EXPOSURE: May irritate people with skin problems, asthma and lung diseases. Susceptible individuals may have an allergic reaction.

SECTION 12 - Ecological information:

ECOLOGICAL PROFILE: No data have been developed on this subject. These products are not soluble in water. Potential environmental impact in case of spill or release is considered to be minimal.

SECTION 13 - Disposal considerations:

WASTE DISPOSAL METHOD: Assume conformity with applicable disposal regulations. Preferred method of disposal is in closed containers of sufficient strength to eliminate leakage at approved incineration or chemical landfill waste disposal site in accordance with local regulations. Sewage disposal is discouraged.

RCRA: Is the unused product a RCRA hazardous waste if discarded? No.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

SECTION 14 - Transport information:

UN Number	: Not classified as hazardous.
UN Proper shipping name	: N/A
Transport hazard class	: Not classified as hazardous.
Packing group	: N/A
IATA	: Not classified as hazardous
Environmental hazards	: Not considered marine pollutant.
	: Not considered environmentally hazardous.
Special precautions	: Keep sealed and secure. Do not expose to heat.
DOT Classification	: Non-Hazardous.
INCO Terms	: EXW for Regulatory Purposes and Responsibilities

SECTION 15 - Regulatory information:

Please request our Regulatory Summary Sheet (RSS) for global regulatory information.

REACH: All substances registered.

REACH (EU) 2017/1000, (EU) 2019/1021, and Stockholm Convention (POP): Conforms

Regulation (EU) 2023/2055 – Synthetic Polymer Microparticles (SPM)

Generic description of the material: HDPE/PTFE/aluminum oxide
Weight percent: 100

(EU) 2023/2055 is derogated for most industrial coatings under the following conditions:

- Microplastics, as substances on their own or in mixtures, for use at industrial sites
- Substances or mixtures containing microplastic where the microplastic is contained by technical means to prevent releases to the environment during end use
- Substances or mixtures containing microplastic where the physical properties of the microplastic are permanently modified during end use such that the polymers no longer fulfil the meaning of a microplastic
- Substances or mixtures containing microplastics where microplastics are permanently incorporated into a solid matrix during end use.

Toxic Substances Control Act (TSCA): This product or its components are listed on the TSCA Inventory. This product and/or its components do not contain any chemicals subject to any rules or orders under TSCA sections 4, 5, 6, 7, or 8(d).

SARA Section 311/312:

- Acute Health Hazard:	No
- Chronic Health Hazard:	No
- Fire Hazard:	No
- Reactivity Hazard:	No
- Sudden Release of Pressure Hazard:	No

SARA Section 302: Contains an extremely hazardous substance: No

SARA Section 313: This product does not contain any toxic chemical listed under Sec.313 of the Emergency Planning and Community Right-To-Know Act of 1986.

US. EPA CERCLA Hazardous Substances (40 CFR 302) - not regulated.

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5) - not regulated.

CLEAN WATER ACT - Priority Pollutants: Contains no known priority pollutants at concentrations greater than 0.1%.

SECTION 16 - Other information:

This SDS conforms to OSHA HCS/HazCom 2012 (29 CFR Parts 1910, 1915, 1926)

This SDS conforms to Regulation (EC) No. 1907/2006 as amended by Regulation (EU) 2020/878

Micro Powders Quality Assurance Program certified to ISO 9001

The following document is available on request from Micro Powders:

Generation and Control of Static Electricity in Coatings Operations (American Coatings Association; Nov 2022)

Other useful guides to handling organic powders include:

NFPA 77	Recommended Practice on Static Electricity
NFPA 654	Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids

NFPA 499 Recommended Practice for the Classification of Combustible Dusts and of Hazardous
(Classified) Locations for Electrical Installations in Chemical Process Areas
OSHA 3371-08 Hazard Communication Guidance for Combustible Dusts

This SDS supersedes all previously published documents dated prior to 11/6/2025.

SDS: C PF-523AL: C

THE DATA SET FORTH IN THIS SDS ARE TYPICAL VALUES (NOT SPECIFICATIONS) BASED ON INFORMATION PROVIDED BY THE SUPPLIERS OF THE RAW MATERIALS AND CHEMICALS USED IN THE MANUFACTURE OF THE AFOREMENTIONED PRODUCT. MICRO POWDERS MAKES NO WARRANTY WITH RESPECT TO THE ACCURACY OF THE INFORMATION PROVIDED BY THEIR SUPPLIERS AND DISCLAIMS ALL LIABILITY OF RELIANCE THEREOF. MICRO POWDERS WARRANTS ONLY THAT ITS PRODUCTS CONFORM TO THEIR PUBLISHED SPECIFICATIONS AND NO OTHER EXPRESS WARRANTY IS MADE WITH REGARD THERETO. WE DO NOT GUARANTEE FAVORABLE RESULTS AND WE ASSUME NO LIABILITY IN CONNECTION WITH THE USE OF THESE PRODUCTS. THEY ARE ALL INTENDED FOR USE BY PERSONS HAVING TECHNICAL SKILL AND KNOWLEDGE, AT THEIR OWN DISCRETION AND RISK.