HAIFLON® PTFE Micropowder HF-105 — General Purpose Grade

CAS No.: 9002-84-0

Haiflon® PTFE micropowder HF-105 is a general-purpose, low-molecular-weight PTFE powder (D50 3.0 – 7.0 µm) for plastics, rubber, inks and coatings. It offers a balanced combination of dispersion, lubrication, anti-wear and non-stick performance, and is the most versatile grade of the suspension-based HF-1xx series.

Product Features

- Balanced particle size (D50 3.0 – 7.0 µm) for plastics, rubber, inks and coatings
- Reduces friction coefficient and improves wear resistance of host materials
- Improves lubricity of moulded thermoplastic parts
- Excellent anti-scratch and abrasion resistance
- Almost universal chemical resistance and wide operating temperature range

Typical Physical Properties

Item	Specification — HF-105
Appearance	White free-flowing micropowder
Average particle size D50, µm	3.0 – 7.0
Max. particle size D99, µm	25.0
Bulk (apparent) density, g/L	300 – 500
Melting point, °C	320 – 330
Specific surface area (BET), m^2/g	1 – 3

Applications

- General additive for engineering plastics and compounds
- Rubber and elastomer modification
- Printing inks and coatings
- Greases and lubricant formulations

Suggested Dosage & Processing Recommendations

- Typical addition levels: 0.5 – 1 % in coatings, 8 – 15 % in engineering plastics, 8 – 10 % in greases and lubricants (from below 1 % up to 20 % depending on system and required effect).
- Deagglomerate for proper distribution; dry-blend with the base resin, add directly into polymer melts, or disperse in liquid systems (surfactants or viscosity adjustment may be required).
- Conventional mixers are generally sufficient; for hard-to-disperse systems use high-shear equipment (three-roll mills, high-speed dispersers or sand mills); evaluate in the laboratory before commercial use.

Comparable Grades

Solvay Polymist XPP-538 (≈4.5 µm)

Safety Precautions for Using PTFE Micropowder

- PTFE micropowder is not classified as a dangerous good for transport. Please refer to the Safety Data Sheet (SDS) before use.
- When heated above 300 °C, PTFE begins to decompose and may release hydrogen fluoride and other harmful fluorinated vapours. Do not exceed the recommended processing temperature of the host system.
- Avoid breathing dust; use local exhaust ventilation and wear a dust mask, gloves and goggles during handling.
- Mixtures with finely divided metals (e.g. magnesium, aluminium) may be flammable or explosive — avoid such combinations.
- Never burn off residues with an open flame or in furnaces; dispose of processing waste through specialized personnel according to local regulations.

Storage & Handling

- Store in a clean, cool, shady and dry warehouse, away from heat sources and direct sunlight, and avoid mixing with dust and moisture.
- Keep the package sealed to prevent moisture uptake, contamination and agglomeration.
- Shelf life: long-term stability if stored below 30 °C in clean and dry conditions.
- Avoid severe vibration, shock and heating during transportation and storage — micropowders tend to agglomerate.

Packing

- Inner package: sealed polyethylene (PE) bag; outer package: moisture-proof paper drum.
- Net weight 25 ± 0.1 kg per drum.
- Other packings are available on request.

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