

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriyat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

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## TECHNICAL DATA SHEET

### MICRONISED POLYPROPYLENE (PP)

#### POLYMER-BASED FUNCTIONAL FILTRATION MEDIA GRADE

#### 1. PRODUCT IDENTIFICATION

Item	Description
Product Name	Micronised Polypropylene (PP) – Functional Filtration Media Grade
Grade Code	MPP-FFM-25
Product Group	Polymer-Based Functional Filtration Media
Base Polymer	Polypropylene Homopolymer
CAS No.	9003-07-0
EC / EINECS No.	618-455-3
HS Code	3902.10.00

#### 2. PRODUCT DESCRIPTION

Micronised Polypropylene (PP) – Functional Filtration Media Grade is a polymer-based filtration material engineered for use as a sacrificial filtration and polishing medium in high-purity liquid processing systems.

The product is manufactured by micronizing a polypropylene homopolymer into a controlled particle-size powder specifically designed to form a permeable, mechanically stable filtration cake when used in pressure-leaf, precoat, or body-feed filtration systems.

The chemical identity of polypropylene remains unchanged. Only the physical form and particle size architecture are modified to enable controlled filtration performance without introducing inorganic contaminants into the process environment.

#### 3. BASE POLYMER – KEY CHARACTERISTICS (REFERENCE ONLY)

The following properties describe the parent polypropylene resin and are provided solely for material traceability and regulatory reference. They do not represent the functional performance of the micronised filtration medium.

Property	Typical Value
Polymer Type	Polypropylene Homopolymer
Melt Flow Index (230 °C / 2.16 kg)	~11 g/10 min
Density	~0.90 g/cm <sup>3</sup>
Melting Range	~190 – 240 °C
Chemical Nature	Non-ionic, inert thermoplastic
Regulatory Status	REACH compliant; TSCA listed

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## 4. PHYSICAL PROPERTIES (MICRONISED FILTRATION FORM)

Property	Typical Value / Description	Test Method
Appearance	White to off-white free-flowing powder	Visual
Odor	Odourless	Sensory
Bulk Density	0.35 – 0.55 g/cm <sup>3</sup>	Tapped Density
Solubility in Water	Insoluble	Visual Observation
Chemical Nature	Non-ionic, chemically inert	—
Ash Content	Very low (polymeric material)	Furnace Method

## 5. PARTICLE SIZE DISTRIBUTION

(Laser Diffraction – Micronised Grade)

The particle size distribution is **intentionally engineered** to support filtration cake permeability and mechanical stability, rather than extreme fineness.

Parameter	Typical Value
D10	~3 – 5 µm
D50	20 – 25 µm
D90	~60 – 80 µm
D99	< 200 – 250 µm
PSD Character	Engineered, unimodal, filtration-optimized

## 6. FUNCTIONAL PERFORMANCE CHARACTERISTICS

- Forms a permeable and mechanically stable filter cake
- Supports controlled and predictable pressure drop ( $\Delta P$ )
- Reduces premature cake blinding during filtration cycles
- Compatible with polymeric filter media (e.g. polypropylene filter cloth)
- Introduces no mineral ash or inorganic ionic contaminants
- Fully removed after filtration as a sacrificial process material

## 7. TYPICAL APPLICATIONS

Industry / Process	Application
Chemical Processing	Filter aid for pressure-leaf and polishing filtration
Non-Aqueous Systems	Filtration of organic liquids and esters
Specialty & Electronic Grades	Filtration where low ash and non-ionic behavior are required
Polymer & Resin Processing	Body-feed or precoat filtration
High-Purity Liquid Systems	Contamination-sensitive polishing filtration

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## 8. THERMAL & PROCESS CONSIDERATIONS

- Stable under typical non-aqueous filtration temperatures
- No melting or deformation under standard filtration conditions
- Thermal behavior governed by polypropylene homopolymer characteristics
- Not intended for melt processing or incorporation into final products

## 9. HEAVY METALS (TYPICAL LIMITS)

Element	Typical Limit
Lead (Pb)	≤ 5 ppm
Cadmium (Cd)	≤ 1 ppm
Mercury (Hg)	≤ 1 ppm
Arsenic (As)	≤ 1 ppm

## 10. REGULATORY INFORMATION (NON-FOOD USE)

Regulation	Status
REACH (EU)	Polymer – exempt from registration
TSCA (USA)	Listed
RoHS / WEEE	Compliant
FDA	Base resin complies with 21 CFR 177.1520; suitability depends on end use and conditions

## 11. PACKING & STORAGE

Item	Description
Packing	20–25 kg laminated paper bags with PE liner
Shelf Life	24 months from date of manufacture
Storage	Cool, dry place; sealed packaging

## 12. PRODUCT DISCLAIMER

This product is intended for industrial use only as a polymer-based functional filtration medium. Data presented are typical values and not specifications unless agreed in writing. Filtration performance depends on system design, operating conditions, dosage, and process parameters. Users are responsible for evaluating suitability for their specific application.

**Month of Creation:** January 2026

**Month of Review:** January 2028