

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempakiat, 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

Mobile - Thai : 0804531391, English: 0839415475, E-mail – contact@polymeradd.co.th



TECHNICAL DATA SHEET PTFE-9002

PRODUCT CLASSIFICATION

Chemical Name	POLYTETRAFLUOROETHYLENE (MICRONIZED)
Grade Name	PTFE-9002
CAS No.	9002-84-0
HS Code	3904.61.00
EINECS No.	Polymer Exempt
Molecular Formula	$(C_2F_4)_n$
Molecular Weight	High Polymer (unspecified)
Synonyms	Micronized PTFE, Polytetrafluoroethylene powder, Teflon® micro powder

PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description	Test Method
Appearance	White fine powder	Visual
Odor	Odorless	Sensory
Density	2.1 – 2.3 g/cm ³	ASTM D792
Melting Point	~327 °C	DSC
Thermal Stability	Stable up to 400 °C	TGA
Moisture Content	≤ 0.05%	Oven drying
Solubility	Insoluble in all solvents	Literature
Oil Absorption	8 – 15 g/100g	ASTM D281
Particle Size (D50)	4 – 8 µm	Laser Diffraction
Particle Size (D99)	< 20 µm	Laser Diffraction
Specific Surface Area	4 – 7 m ² /g	BET Method

➤ Micronized PTFE may exhibit high lubricity and low surface energy, making it critical to control particle distribution and morphology depending on the application.

HEAVY METALS (EU REGULATION 10/2011 – CONTENT LIMITS IN ADDITIVES)

Element	Typical Limit	Test Method
Lead (Pb)	≤ 5 ppm	ICP, AAS, XRF
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 1 ppm	ICP, CV-AAS
Arsenic (As)	≤ 1 ppm	ICP, AAS

USES / APPLICATION

Industry	Commercial Application / Uses (Micronized Grade)
Inks & Coatings	Slip and anti-scratch additive for can coatings, coil coatings, wood coatings
Lubricants	Dry film lubricant, wear-reducing additive in greases and oils
Thermoplastics	Processing aid and anti-drip modifier in flame-retardant polymers

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalaremprikat, 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

Mobile - Thai : 0804531391, English: 0839415475, E-mail – contact@polymeradd.co.th



Elastomers	Internal lubricant and friction reducer in rubber compounds
Powder Coatings	Texture control, anti-mar, and gloss adjustment
Adhesives & Sealants	Release agent and wear modifier in structural adhesives
Electrical & Electronics	Non-stick additive in wire coatings and electronics-grade polymers

US FDA 21 CFR LISTING

CFR Section	Title / Description
177.1550	Perfluorocarbon resins – listed for food-contact under specific limits
175.300	Resinous and polymeric coatings for metal surfaces
177.1380	Articles used in repeated-use food processing equipment

COLOUR IMPACTING IMPURITIES

Element	Typical Max Limit (ppm)	Test Method
Iron (Fe)	≤ 50 ppm	ICP, AAS, XRF
Manganese (Mn)	≤ 20 ppm	ICP, AAS, XRF
Copper (Cu)	≤ 15 ppm	ICP, AAS, XRF
Nickel (Ni)	≤ 10 ppm	ICP, AAS, XRF
Chromium (Cr)	≤ 10 ppm	ICP, AAS, XRF

PRODUCT PERFORMANCE IMPACTING IONS / IMPURITIES

Ion / Element	Typical Max Limit (ppm)	Test Method
Sodium (Na)	≤ 100 ppm	ICP, AAS, XRF
Potassium (K)	≤ 100 ppm	ICP, AAS, XRF
Calcium (Ca)	≤ 150 ppm	ICP, AAS, XRF
Magnesium (Mg)	≤ 100 ppm	ICP, AAS, XRF
Chloride (Cl ⁻)	≤ 50 ppm	Ion Chromatography
Sulfate (SO ₄ ²⁻)	≤ 50 ppm	Ion Chromatography

Disclaimer:

Micronized PTFE is a specialty product designed for industrial use. It should not be used in medical implants or products intended for internal human contact. Suitability for food contact or high-purity applications must be independently verified. Listed values are typical and not specifications unless otherwise agreed upon in writing.

Month of Creation: July 2025

Month of Review: July 2027