Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalaremprakiat, 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

SIL-200 TECHNICAL DATA SHEET

Chemical Name	**SILICA (FUMED / PRECIPITATED)**
Grade Name	**SIL-200 (Micronized Silica)**
CAS No.	7631-86-9
HS Code	2811.22.00
EINECS No.	231-545-4
Molecular Formula	SiO_2
Molecular Weight	60.08 g/mol
Synonyms	Amorphous Silica, Synthetic Silica, Precipitated Silica, Fumed Silica, Silicon Dioxide

Property | Typical Value / Description | Test Method

Property	Typical Value / Description	Test Method
Appearance	Fine white powder	Visual
Odor	Odourless	Sensory
pH (5% dispersion)	3.5 – 7.0 (grade-dependent)	pH meter
Moisture Content	≤ 5.0%	Oven drying (105°C)
SiO_2 Content	≥ 98%	Gravimetric
Specific Surface Area	150–400 m^2/g (BET)	BET Surface Area Analyzer
Loss on Ignition (LOI)	≤ 8.0% (at 1000°C)	Muffle Furnace
Oil Absorption	200 – 350 g/100g (grade-dependent)	ASTM D281
Bulk Density	40 – 120 g/l (untapped)	Tapped Density Method
Particle Size (D50)	2 – 3 µm (micronized)	Laser Diffraction
Solubility in Water	Insoluble	Visual Observation
Refractive Index	~1.46	Literature / Optical Method

Heavy Metals (EU Regulation 10/2011 — Content Limits in Additives)

(Food Contact / Additive Use)

Element	Typical Limit	Test Method
Lead (Pb)	≤ 2 ppm	ICP, AAS, XRF
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 0.1 ppm	ICP, CV-AAS
Arsenic (As)	≤ 1 ppm	ICP, AAS
Chromium (VI)	ND	UV-Vis (post-extraction)

Colour Impacting Impurities

Element	Typical Max Limit (ppm)	Test Method
Iron (Fe)	≤ 50 ppm	ICP, AAS, XRF
Manganese (Mn)	≤ 10 ppm	ICP, AAS, XRF

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Copper (Cu)	≤ 5 ppm	ICP, AAS, XRF
Nickel (Ni)	≤ 5 ppm	ICP, AAS, XRF

Product Performance Impacting Ions / Impurities

Ion / Element	Typical Max Limit (ppm)	Test Method
Sodium (Na)	≤ 200 ppm	ICP, AAS
Chloride (Cl^-)	≤ 200 ppm	Ion Chromatography
Sulfate (SO_4^{2-})	≤ 200 ppm	Ion Chromatography
Aluminum (Al)	≤ 300 ppm	ICP, AAS

Disclaimer:

This product is manufactured under standard industrial practices. While it meets general specifications for heavy metals and color-impacting impurities, food or pharmaceutical applications require batch-specific certifications to be requested at the time of order. Not intended for implantation or prolonged exposure to skin or mucous membranes.

USES / APPLICATION

Industry	Commercial Application / Uses (Micronized Grade)
Plastics & Polymers	Rheology modifier, reinforcing filler, anti-caking in PVC, PE, and PP compounds
Paints & Coatings	Matting agent, thickener, anti-settling agent
Adhesives & Sealants	Viscosity control, sag resistance, reinforcement
Rubber	Abrasion resistance, opacity booster
Cosmetics	Soft-focus agent, absorbent, thickener in powders and creams
Pharmaceuticals	Flow aid, glidant, tablet coating agent
Inks	Anti-settling additive, ink rheology control

US FDA 21 CFR LISTING

CFR Section	Title / Description
172.480	Silicon dioxide (as anticaking agent in food)
177.2600	Rubber articles intended for repeated use
182.90	GRAS – Substances generally recognized as safe

Month of Creation: June 2025
Month of Review: June 2027