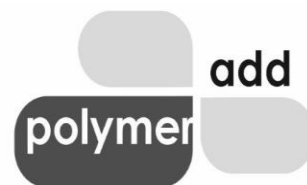


Polymer Add (Thailand) Co.,Ltd.

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



CS-116

TECHNICAL DATA SHEET

Chemical Name	CALCIUM SILICATE (MICRONIZED)
Grade Name	CS-116
CAS No.	1344-95-2
HS Code	28399090
EINECS No.	215-710-8
Molecular Formula	Ca_2SiO_4 (common form) Alternatively: CaSiO_3
Molecular Weight	116.16 g/mol (for CaSiO_3)
Synonyms	Wollastonite (natural form) Calcium Metasilicate Calcium Orthosilicate Ca Silicate

TEST	SPECIFICATION	METHOD
Appearance	Fine white to off-white powder	Visual
Purity (CaSiO_3), % (dry basis)	$\geq 95.0\%$	Gravimetric / XRF
Loss on Ignition (LOI), %	$\leq 8.0\%$	Thermogravimetric
Moisture, %	$\leq 0.5\%$	Oven @ 105 °C
Oil Absorption, g/100g	40–70 (application-specific)	ISO 787-5
pH (10% suspension)	9.0–11.0	ISO 787-9
D50 Particle Size (μm)	2 – 5 μm	Laser Diffraction
D90 Particle Size (μm)	< 10 μm	Laser Diffraction
Whiteness (Hunter L)	≥ 90	Spectrophotometer (CIE)

Heavy Metals (EU Regulation 10/2011 (content limits in additives) Plastics (Food-Grade / Repeated Use)

Element	Typical Limit	Method
Lead (Pb)	≤ 10 ppm	ICP, AAS, XRF
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 1 ppm	ICP, AAS, CV-AAS
Arsenic (As)	≤ 3 ppm	ICP, AAS
Chromium (VI)	ND or ≤ 0.1 ppm	UV-Vis (after extraction)

Colour impacting impurities

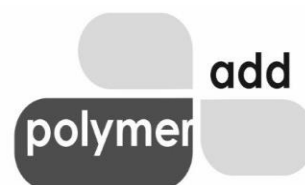
Element	Typical Max Limit	Method
Iron (Fe)	≤ 200 ppm	ICP, XRF
Manganese (Mn)	≤ 50 ppm	ICP
Chromium (Cr)	≤ 50 ppm	ICP

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Copper (Cu)	≤ 30 ppm	ICP
Nickel (Ni)	≤ 30 ppm	ICP

Product performance impacting impurities		
Ion/Element	Limit	Method
Chloride (Cl ⁻)	≤ 0.1%	AAS, Ion Chromatography
Sodium (Na)	≤ 200 ppm	ICP
Potassium (K)	≤ 100 ppm	ICP

Disclaimer:

This product is manufactured in accordance with general industrial quality standards. While typical batches comply with EU 10/2011 heavy metal limits for additives and are monitored for key colour-impacting impurities, these parameters are not routinely tested and are not included in standard Certificates of Analysis unless specifically requested at time of order. Customers requiring guaranteed compliance for food-contact or colour-critical applications should request analytical certification prior to dispatch.

USES / APPLICATION

Industry	Commercial Application / Uses (Micronized Grade)
Plastics	Anti-blocking agent in PE/PP films, anti-caking filler in masterbatches, mechanical reinforcement in thermoplastics
Rubber	Reinforcing filler in silicone and EPDM compounds, improves heat resistance and dimensional stability
Paints & Coatings	Flatting agent, matting agent, TiO ₂ extender in architectural and industrial coatings
Paper (Coating Grade)	Coating pigment to improve brightness, smoothness, ink holdout and reduce binder demand
Adhesives & Sealants	Rheology modifier, thixotrope, filler to improve mechanical strength and reduce shrinkage
Inks	Anti-settling agent, extender for pigment dispersion, improves printability and ink film strength

US FDA 21 CFR LISTING

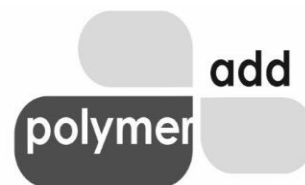
CFR Section	Title / Description
182.2227	Calcium silicate – GRAS as an anticaking agent in food, up to 2% by weight (direct food use)
177.1210	Closures with sealing gaskets for food containers (used as filler)
177.1200	Cellophane – component of base sheet or coating
177.2600	Rubber articles intended for repeated use (e.g., gaskets, seals, hoses)
175.300	Resinous and polymeric coatings (used as a component in coatings in contact with food)
175.105	Adhesives (indirect food contact – allowed as a component of adhesive formulation)

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Month of Creation	May 2025
Month of Review	May 2027



Aditya Jogdeo
Technical Director