

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriakiat, 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

CUBZ-2M

Chemical Name	Copper(II) Benzoate
Grade Name	CuBZ-2M (Micronized Grade)
CAS No.	22653-97-4
HS Code	2916.31.00
EINECS No.	245-150-1
Molecular Formula	C ₁₄ H ₁₀ CuO ₄
Molecular Weight	293.78 g/mol
Synonyms	Cupric Benzoate, Benzoic Acid Copper Salt, Copper Dibenzonate

PROPERTY | TYPICAL VALUE / DESCRIPTION | TEST METHOD

Property	Typical Value / Description	Test Method
Appearance	Blue to blue-green crystalline powder	Visual
Odor	Odorless	Sensory
Purity (as Cu(C ₆ H ₅ COO) ₂)	≥ 98%	Titrimetric / Gravimetric
Copper Content (Cu)	21–23%	AAS / ICP
Melting Point	>260 °C (decomposes)	Literature / TGA
Moisture Content	≤ 1.0%	Oven drying (105 °C) / KF
Bulk Density	0.35 – 0.55 g/cm ³	Tapped Density
Particle Size (D50)	3 – 8 µm (micronized)	Laser Diffraction
Solubility	Slightly soluble in water; soluble in ammonia, acids	Visual / Solubility Test
Thermal Stability	Stable up to 250 °C (before decomposition)	TGA
pH (1% in water)	5.0 – 6.0	pH Meter

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

(FOR POLYMER ADDITIVE USE)

Element	Typical Limit	Test Method
Lead (Pb)	≤ 5 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)

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USES / APPLICATION

Industry	Commercial Application / Uses (Micronized Grade)
VCI Systems	Vapor-phase corrosion inhibitor (copper, brass, bronze) for films, paper, and coatings
Polymers & Plastics	Antimicrobial additive, antifungal treatment in polyolefins and coatings
Rubber & Elastomers	Heat stabilizer and pigment in specialty rubber compounding
Paints & Inks	Blue pigment precursor, corrosion inhibitor in anti-corrosive primers

US FDA 21 CFR LISTING

CFR Section	Title / Description
Not specifically listed	Use in food-contact materials subject to specific migration limits and local approvals

COLOUR IMPACTING IMPURITIES

Element	Typical Max Limit (ppm)	Test Method
Iron (Fe)	≤ 100 ppm	ICP, AAS, XRF
Manganese (Mn)	≤ 50 ppm	ICP, AAS, XRF
Chromium (Cr)	≤ 50 ppm	ICP, AAS, XRF
Nickel (Ni)	≤ 50 ppm	ICP, AAS, XRF

PRODUCT PERFORMANCE IMPACTING IONS / IMPURITIES

Ion / Element	Typical Max Limit (ppm)	Test Method
Sodium (Na)	≤ 200 ppm	ICP, AAS
Potassium (K)	≤ 200 ppm	ICP, AAS
Chloride (Cl ⁻)	≤ 200 ppm	Ion Chromatography
Sulfate (SO ₄ ²⁻)	≤ 200 ppm	Ion Chromatography

Disclaimer

Copper(II) Benzoate is intended for industrial applications including VCI systems and polymer compounding. While it may be used in materials indirectly contacting food or sensitive metals, specific approvals and testing are required. Not evaluated for pharmaceutical or biomedical use. Batch-specific CoA is available on request.

Month of Creation: June 2025

Month of Review: June 2027