

PBTC

Phosphonate-carboxylate scale inhibitor and sequestrant for industrial water treatment.

CAS No. 37971-36-1	EC / List No. 253-733-5	Transport Class 8 — Corrosive
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Product Information

PBTC combines phosphonic-acid and carboxylic-acid functionality in one molecule. Industrial formulators use it for metal-ion sequestration and scale-control programmes in circulating cooling water, oilfield injection water and cleaning systems. Performance depends on hardness, alkalinity and the complete treatment package.

Specifications

Parameter	Specification
Appearance	Clear, colorless to pale yellow aqueous solution
Active acid (PBTC)	≥50.0 %
Phosphorous acid	≤0.5 %
Phosphoric acid	≤0.2 %
pH, 1% water solution	1.5–2.0
Density at 20°C	≥1.270 g/cm ³
Iron	≤10.0 ppm
Chloride	≤10.0 ppm

Limits and the 10-month storage period are from the local TDS. Component formula and molecular weight refer to PBTC acid, not the complete aqueous solution.

Typical Properties

Property	Typical Value
Molecular formula	C ₇ H ₁₁ O ₉ P
Molecular weight	270.13 g/mol

Applications

Cooling-water treatment: Scale-control and sequestrant component for circulating industrial cooling-water formulations. Evaluate with the selected zinc salts and polymers using the actual hardness, alkalinity and operating conditions.

Oilfield injection-water programmes: Phosphonate component for oilfield injection-water scale-control formulations. Check compatibility with brines, injection chemicals and process materials before selecting dosage.

Industrial cleaning and detergents: Chelating and sequestration component for mineral-control and metal-cleaning formulations. Evaluate cleaning performance and surface compatibility at the intended working pH.

Packaging / Storage

Item	Information
Packing	25 kg or 250 kg plastic drums
Storage	Store closed in a cool, ventilated area away from sunlight and extremes of temperature. Protect from freezing and keep away from oxidizers, alkalis and unsuitable metals. Use corrosion-resistant containers.
Handling	Prevent skin and eye exposure, and avoid breathing mist. Wear chemical-resistant gloves, protective clothing and eye/face protection. Use compatible transfer equipment and local extraction where mist is formed.

Company Contact

Supplier	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
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