



2-PHOSPHONOBUTANE-1,2,4-TRICARBOXYLIC ACID (PBTC)

CAS Number: 37971-36-1
Chemical Formula: $C_7H_{11}O_9P$

APPLICATIONS

PBTC is a highly effective scale and corrosion inhibitor with excellent performance under high temperature and high hardness conditions. It is widely used for:

- Circulating cooling water systems
- Oilfield water injection systems
- Stabilization of zinc salts in water treatment
- High-temperature and high-alkalinity environments
- Chelating agent and metal detergent in cleaning applications
- Synergistic formulations with zinc salts, copolymers, organophosphines, and other water treatment chemicals

USAGE

- Standalone dosage: 5–15 mg/L
- Can be used in combination with zinc salts, copolymers, and organophosphines for improved performance.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Appearance	Clear, colorless to pale yellow liquid
Active Acid (%)	≥ 50.0
Phosphorous Acid (as PO_3^{3-}) (%)	≤ 0.5
Phosphoric Acid (as PO_4^{3-}) (%)	≤ 0.2
Density (20 °C, g/cm ³)	≥ 1.27
pH (1% solution)	1.5 – 2.0
Iron (Fe, ppm)	≤ 10
Chloride (Cl, ppm)	≤ 10
Color (Hazen)	≤ 30



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PLEASE READ CAREFULLY.**

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This document is subject to revision without notice as new data becomes available.

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PACKAGING

- 200 L plastic drums
- 1,000 L IBCs
- Custom packaging available on request

STORAGE & HANDLING

Store in a cool, dry, and well-ventilated area away from incompatible materials. Shelf life is at least 12 months under recommended storage conditions.

SAFETY

PBTC is acidic and may cause skin and eye irritation. Handle with proper PPE including gloves and goggles. Consult the Safety Data Sheet (SDS) before use.