

VerdiPhos P50

PBTC 50% • PBTCa • LIQUID

Chemical name	2-Phosphonobutane-1,2,4-tricarboxylic acid
Common name	PBTC / PBTCa
CAS No.	37971-36-1
Molecular formula	C ₇ H ₁₁ O ₉ P
Molecular weight	270.13 g/mol
Physical form	Clear, colorless to pale yellow aqueous solution

PRODUCT DESCRIPTION

VerdiPhos P50 is a 50% aqueous solution of 2-Phosphonobutane-1,2,4-tricarboxylic acid (PBTC). It is a high-performance phosphonate scale and corrosion inhibitor with excellent calcium tolerance, good chlorine oxidation resistance and strong performance under high temperature, high hardness, high alkalinity and high concentration conditions. It is also used as a zinc-stabilizing and chelating agent in industrial water treatment and cleaning formulations.

TYPICAL TECHNICAL SPECIFICATIONS

Parameter	Unit	Specification
Active content (as PBTC)	%	50.0 min
Phosphorous acid (as PO ₃ ³⁻)	%	0.5 max
Phosphoric acid (as PO ₄ ³⁻)	%	0.2 max
pH (1% aqueous solution)	—	1.5 - 2.0
Density at 20°C	g/cm ³	1.27 min
Iron (Fe)	mg/L	10.0 max
Chloride (as Cl ⁻)	mg/L	10.0 max
Appearance	—	Clear, colorless to pale yellow aqueous solution

Key applications	Cooling-water and boiler-water treatment • Scale and corrosion inhibition • Oilfield water injection • Zinc-salt stabilization • High-temperature and high-hardness water systems • High-alkalinity/high-concentration programs • Industrial cleaning • Chelating and metal-cleaning formulations
Storage & handling	Store in a cool, dry, shaded and well-ventilated area. Keep containers tightly closed when not in use. Product is acidic; avoid contact with skin and eyes. Use suitable PPE during handling and flush immediately with plenty of water in case of contact.



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