

Metaqua® 5050

Corrosion inhibitor for drinking water systems based on a combination of orthophosphates and polyphosphates.
The main product for Method® integration procedure.

APPLICATION

Metaqua® 5050 is a corrosion inhibitor mainly for central water systems. It can also be used in industrial water supply systems and as a primary product for the patented Method® integration process (EP 0860517).

Metaqua® 5050 is recommended for medium-hard and hard water. The combination of orthophosphates and polyphosphates reduces corrosion rates and prevents brown water from forming in low flow and stagnant areas. The product can be used to reduce corrosion on equipment with copper surfaces.

SPECIFICATION

Metaqua® 5050 is a liquid concentrated product based on orthophosphates and polyphosphates.

Form:	transparent
Density (20°C/68°F):	1,38 ± 0,02 g/cm ³
Viscosity:	< 60 ± 10 mPas/s
concentrate pH:	3,4 ± 0,5
pH (1% liquid):	4,8 ± 0,5
Total value PO ₄ :	35,0 ± 1,5 %
Solubility in water:	completely dissolve
Ratio:	PO ₄ ⁻ x 0,7473 = P ₂ O ₅ ⁻ ; PO ₄ ⁻ x 0,3261 = P-
Freezing sensitivity:	below 0 °C
Freezing point:	Approx. -15 °C

LEGAL REQUIREMENTS

Metaqua® 5050 composition and recommended dosage comply with German drinking water regulations. Metaqua® 5050 complies with DIN EN and FAO/PSO Food Additives Committee standards.

ACTION PRINCIPLES

The action of Metaqua® 5050 corrosion inhibitor for steel, galvanized steel and copper systems is based on the formation of a protective layer of phosphate. Metaqua® 5050 prevents the formation of brown water by deactivating ions of heavy metals such as iron and manganese. Components of polyphosphates stabilize water hardness and prevent precipitation in warm and cold water. DVGW Technologiezentrum Wasser Karlsruhe (Germany) has shown that even in critical areas of the phosphate system, as well as active phosphorus and non-phosphorus carbonate silicates can successfully solve the brown water problem. When using the Metaqua® 5050 integration method, the action to reduce corrosion can be activated in combination with a Carbosil SC product.

DOSAGE

The dosage depends on the water parameters and operating conditions. Typical Metaqua® 5050 dose is from 3 to 8 ml/m³. Process control includes control of the water treatment process and analytical control of water quality. The correct dosage of the product can be determined with the help of ŠOMIS specialists.

USAGE

Metaqua® 5050 is used undiluted. Metaqua® 5050 must be continuously dosed with an automatic dosing system in proportion to the amount of water. All dosing equipment (containers, pumps, pipes) must be made of acid-resistant materials.

STORAGE

Metaqua® 5050 should be stored at temperatures from 0 °C to + 30 °C.

Storage containers must be closed tightly and must not be exposed to sunlight. Metaqua® 5050 should be used within 6 months.

ANALYSIS

To determine the concentration of Metaqua® 5050 it is possible to use conventional methods of analysis (see A21E method of analysis of inorganic phosphates), estimating the amount of PO₄ in water.

$1 \text{ g/m}^3 \text{ Metaqua}^{\circledR} 5050 = 0.35 \text{ g/m}^3 \text{ bendro-PO43-}$

$1 \text{ ml/m}^3 \text{ Metaqua}^{\circledR} 5050 = 0.48 \text{ g/m}^3 \text{ total -PO43-}$

PRECAUTIONS

Please read the safety data sheet.

The expiry date of the product is indicated on the label.

CERTIFICATES

Our quality management system (ISO 9001:2008) and environmental management system (ISO 14001:2005) are DQS certified.