

VpCI® ADDITIVES FOR WATER TREATMENT

S-69 P, S-69 PMF, and S-69 B

Powder VpCI® Water Treatment Building Blocks



PRODUCT DESCRIPTION

S-69 Powders are Vapor phase Corrosion Inhibitors (VpCI®) developed as corrosion prevention additives for the water treatment industry. These building blocks provide multimetal protection, including galvanized steel and yellow metals. The VpCIs form a strong monomolecular layer on the metal surface that protects in all three phases-liquid, vapor, and the vapor-liquid interface. S-69 Powders provide water treatment companies with the ability to incorporate Cortec® VpCI technology into their specific formulations.

The concentration of S-69 inhibitor in an application can be monitored with a molybdenum tracing kit, or with UV spectroscopy.

A molybdenum-free version (S-69 PMF), and lower-pH version (S-69B,) of S-69P are also available.

TYPICAL APPLICATIONS

S-69 Powders are anticorrosion additives to water treatment formulations to replace chromates, nitrites, phosphonates, and other types of restricted corrosion inhibitors. Powder should be pre-diluted, forming a clear homogenous solution prior to addition into the system being treated.

DOSAGE RATES

- a) Closed loop-fresh water
Concentration of S-69 Powders under operating conditions for a closed loop system formulation start at 1500 ppm - 2000 ppm.
- a) Closed loop-brine
Concentration of S-69 Powders under operating conditions for a closed loop system formulation is 1-5 %.
- c) Open loop-fresh water
Concentration varies with formulations but can be used as low as 10-15 ppm in continuous feeds.
- d) Open loop-fresh water-passivation
Concentration of 3000-4000 ppm for 1-2 weeks.

FEATURES

- Protects carbon steels, zinc, stainless steel, galvanized steel, copper, and other metals
- Use S-69 B for aluminum protection
- Prevents corrosion and pitting
- Effective for open and closed loop cooling systems
- Contains contact and vapor phase corrosion inhibitors
- Can be used as a corrosion inhibitor additive in the majority of water treatment programs
- Compatible with the majority of commercially available biocides and antiscalants
- Nitrite, chromate, and heavy metal free
- Readily water-soluble powder for easy application
- Environmentally friendly formulation
- Easily traceable utilizing a Molybdenum test kit or with UV spectroscopy

TYPICAL PROPERTIES

Appearance White to off-white powder
pH of S-69 P 12.5-13.5 (10% aqueous)

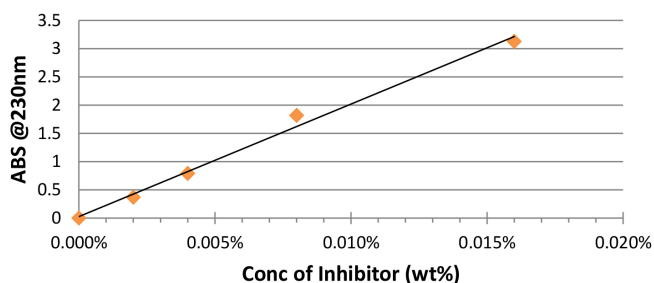
ppm in DI Water	Conductivity
1000	~600 μS
2000	~1700 μS
3000	~2000 μS
5000	~2700 μS

pH of S-69 B 9.1-9.6 (1% aqueous)

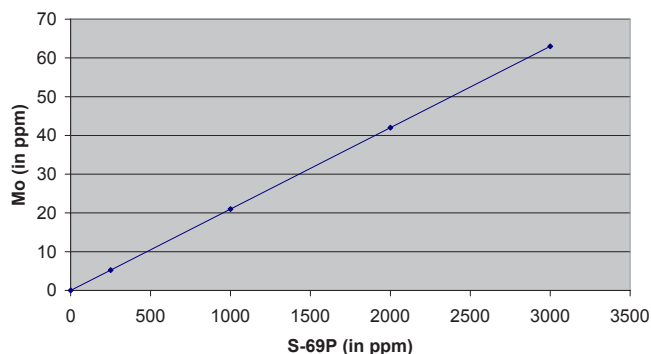
ppm in DI Water	Conductivity
250	~150 μS
1000	~600 μS
2000	~1120 μS



Inhibitor Conc. vs. Abs at 230nm



Theoretical concentration of Molybdenum vs. S-69P



TOXICOLOGICAL TESTING RESULTS

TEST SPECIES	NOEC/LOEC, ppm	48-hr LC50*, ppm
M. beryllina	100/1000	316
M. bahia	100/1000	569
D. pulex	10,000/> 10,000	---
P. Promelas	10,000/> 10,000	---

*LC/50/EC50-50% of Lethal concentration/50 % of Effective Concentration respectively

PACKAGING AND STORAGE

S-69 Powders are packaged in 5 lb (2.27 kg) boxes and 50 lb (22.7 kg) and 100 lb (45.3 kg) drums. They should be stored in a tightly closed container. The shelf life is 2 years.

FOR INDUSTRIAL USE ONLY

KEEP OUT OF REACH OF CHILDREN

KEEP CONTAINER TIGHTLY CLOSED

NOT FOR INTERNAL CONSUMPTION

CONSULT SAFETY DATA SHEET FOR MORE

INFORMATION

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