S-7 / S-7 Liquid

PRODUCT DESCRIPTION

S-7 is a catalyzed sodium sulfite based oxygen scavenger designed to protect low to medium pressure boiler systems against corrosion. Oxygen present in feed water can cause severe damage to boiler equipment if left unchecked. An oxygen induced attack can lead to pitting corrosion on the metal surface, which can result in rapid failure of the boiler. Ten parts of S-7 are necessary to remove one part oxygen. It is not recommended to use S-7 in high pressure boilers.

$$(10 \times \text{Dissolved Oxygen}) + \frac{\text{Residual} \times 1.6}{\text{Feed Water Cycles}} = \text{ppm Sodium Sulfite Required}$$

S-7 Liquid is a bisulfite-based oxygen scavenger which will rapidly remove oxygen from feed water or boiler water. S-7 Liquid can also be used in softening treatments and reverse osmosis systems. S-7 Liquid is easy to use - it can be fed directly from container.

FEATURES

- Economical
- Safe to use
- Easy control
- Effective against dissolved oxygen
- Compatible with other Cortec additives such as M-645
- Compatible with Cortec's corrosion inhibitors for boilers, such as VpCI®-615 and VpCI®-617

TYPICAL PROPERTIES

S-7

Colour	Off-white to tan
Physical Form	Granular powder
pH	9.5-10.5 (1% aqueous)
Specific gravity	2.63 @ 68°F (20°C)
Solubility in water	17%
Shelf Life	up to 2 years (properly sealed container)

S-7 Liquid

Colour	Clear yellow to green
Physical Form	Liquid
pH	3.7-5.3 (1% aqueous)
Specific gravity	1.33 @ 68°F (20°C)
Solubility in water	Complete
Shelf Life	up to 2 years (properly sealed container)

DOSAGE

The dosage will vary depending on the amount of dissolved oxygen in the boiler water. A starting dosage of S-7 is 100 ppm. S-7 should continue to be added until desired dissolved oxygen level is reached in the boiler water.

A sufficient amount of S-7 Liquid should be fed to maintain a sulfite $(SO_3)^{2-}$ residual of 20-40 ppm in the boiler water. Feed 20 ppm per ppm of oxygen.

APPLICATION

Maximum and minimum limits are specified for control of boiler water sodium sulfite concentrations. Do not hesitate to increase or decrease the feed of this chemical, as necessary, in order to keep boiler water sulphite concentrations between the specified limits. Minimum residual levels of sodium sulphite should be between 30-60 ppm, when the boiler is operating below 150 psi. The recommended limits for sodium sulphite control are:

Boiler Pressure	Sodium Sulphite Residual
0-150 psi	30-60 ppm
150-300 psi	20-40 ppm
300-600 psi	20-30 ppm
600-900 psi	10-15 ppm
900-1200 psi	5-10 ppm
1500 psi	Sodium Sulphite Not Recommended

Test kits can be purchased from companies such as the HACH Company to monitor the level of dissolved oxygen.

CORTEC CORPORATION
Environmentally Safe VpCI®/MCI® Technologies

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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