TECHNICAL DATA SHEET

H 555

Molybdate -Based Corrosion Inhibitor for Closed Water Systems

1. PRODUCT DESCRIPTION

H 555 is a high-performance molybdate-based corrosion inhibitor formulated to provide effective protection for ferrous metals in closed cooling and heating water systems.

The product is based on sodium molybdate combined with a specialized inhibitor package to ensure long-term system protection and stability under various operating conditions.

It is specifically designed for:

- Closed chilled water systems
- Closed low-pressure hot water systems
- Firefighting and sprinkler systems

The product is compatible with glycol-based antifreeze systems.

2. MECHANISM OF ACTION

H 555 provides corrosion protection through anodic passivation by forming a stable protective oxide layer on metal surfaces.

Molybdate ions promote the formation of a durable passive film that reduces metal loss and prevents corrosion initiation.

The inhibitor system ensures:

- Long-term protection of mild steel
- Stability under high temperature and heat flux
- Reduced corrosion rates

3. APPLICATION & DOSAGE

Initial Dosing:
1.5 – 3.0 kg per m^3 of total system volume

Target Residual:
200 – 500 ppm Molybdate (as MoO_4^{2-})

Recommended Operating pH:
8.0 – 10.5

Monitoring:
Molybdate concentration should be tested regularly using a standard molybdate test kit.

Maintain minimum residual level of 250 ppm for optimal protection.

The product may be fed:

- Continuously based on make-up water
- Intermittently based on system volume

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4. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Appearance: Clear to light yellow liquid

Odor: Mild

pH (as supplied): 8.5 – 10.0

Specific Gravity @ 25°C: 1.30 – 1.40

Solubility: Completely soluble in water

Flammability: Non-flammable

Volatility: Non-volatile

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5. COMPATIBILITY

Compatible with:

- Mild Steel
- Carbon Steel
- Cast Iron
- Copper and copper alloys
- Glycol / antifreeze systems

Not recommended for:

- Systems with high oxygen ingress without secondary inhibitor

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6. PACKAGING

Available in:

25 kg HDPE drums

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7. STORAGE & SHELF LIFE

Store in tightly closed containers in a cool, dry, and well-ventilated area.

Protect from freezing. If frozen, thaw completely and mix well before use.

Shelf Life: 24 months under recommended storage conditions.

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8. ADVANTAGES

- Excellent corrosion protection for closed systems
- Environmentally safer compared to nitrite-based programs
- Stable at high temperatures
- Easy monitoring using molybdate test kits
- Compatible with glycol systems
- Long-lasting protective film