



VpCI™ ADDITIVES FOR COATINGS, FLUIDS, ADHESIVES AND PLASTICS

M-235

PRODUCT DESCRIPTION

M-235 is a proven corrosion inhibitor for copper, copper-based alloys and other yellow metals. M-235 functions by reacting with surface copper oxides to form a strong, insoluble polymeric complex. This complex creates a thin layer or film on metal surfaces that provides both a mechanical and electrochemical barrier against corrosive attack. This protective layer has a high degree of thermal and oxidative stability and cannot be easily removed. M-235 complexes yellow metal ions in solution, thereby preventing galvanic corrosion of other metals in contact with copper. M-235 has solubility in some water and organic systems.

SUGGESTED USES

M-235 can be used in many applications for protection of yellow metals.

- Direct treatment on rolled copper or brass sheets and coils
- Circulating cooling systems such as cooling towers and air conditioning systems
- Functional fluids such as hydraulic fluids, specialty lubricants, automotive coolants and metalworking fluids
- Wrapping paper and box board for wrapping, interleaving, shipping and storing copper and brass items
- Corrosion protective coatings such as lacquers and waxes
- Cleaners such as soaps, detergents and strong alkali or acid cleaners
- Fabricated products made from copper and brass
- Artifacts, sculptures and decoration items

DOSAGE

M-235 has an almost neutral pH when incorporated into liquids at a concentration between 0.1 and 2.0%. Liquids may be either aqueous or non-aqueous. It may also be used as a solid or vapor. For a specific recommendation please contact a Cortec representative.

TYPICAL PROPERTIES

| | |
|---------------------------------|---------------------------|
| Appearance | White to off-white powder |
| Assay | 98-100% |
| Melting Point | 94°-99°C (201°-210°F) |
| <i>Solubility, wt. %, 25°C:</i> | |
| Water | 1.98 |
| 60°C | 7.4 |
| Methanol | 71.6 |
| Methoxy-2-Propanol | 55.0 |
| Isopropanol | 53.9 |
| Heptanol | 34.6 |
| Ethylene Glycol | 150.7 |
| Polyethylene Glycol | 47.7 |
| Methyl Ethyl Ketone | 46.1 |
| Benzene | 1.3 |
| Tetrachloroethylene | 0.06 |
| White Mineral Oil* | 0.1 |
| Turbine Oil* | 0.01 |

*Petroleum oil formulations containing polar additives, such as tricresyl phosphate and alkylbenzenesulfonic acid derivatives, will increase the apparent solubility.

PACKAGING

M-235 is available in 5 pound (2.3 kg), 50 pound (23 kg), 100 pound (45 kg) fiber drums and bulk.

FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN
KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION
CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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