



# **VpCl™ ADDITIVES FOR COATINGS, FLUIDS, ADHESIVES AND PLASTICS**

# M-238

#### **PRODUCT DESCRIPTION**

M-238 is a solvent-based blend of contact and vapor phase inhibitors designed as an additive to aromatic, paraffinic, naphthenic, fluorocarbon and hydrocarbon-based products. It provides multimetal protection during operating and idle conditions. M-238 leaves a very thin film on ferrous and nonferrous metal surfaces, which protects metals even in very humid atmospheres.

### **FEATURES**

- Stable in hydrocarbon solutions
- Can be blended at every stage of production
- Works as a thin self-healing film
- Environmentally friendly
- Low VOC
- Protection is immediate
- Contains contact and vapor phase inhibitors
- Provides multimetal protection
- Effective at low concentrations
- Compatible with many antioxidants, EPs, antiscuff products and other hydrocarbon-based additives
- Can be painted over\*

\*Tests show when M-238 was added to a naphthenic-based cleaner up to 5% by weight, there was no decrease in adhesion for a permanent acrylic-based topcoat on carbon steel.

#### TYPICAL APPLICATIONS

Use M-238 as an additive to:

- Solvents
- Synthetic formulations
- Hydrocarbon formulations
- Add to solvent or oil-based fluids @ 1-4% by weight

## **TYPICAL PROPERTIES**

Appearance Clear yellow liquid

Non-volatile Content 70-75%

pH 8.5-9.0 (1% aqueous)

Density 7.5-7.6 lb/gal (0.89-0.91 kg/l)



#### TYPICAL PERFORMANCE PROPERTIES

M-238 was added at 4% to a synthetic hydrocarbon (S.H.) and a hydrocarbon cleaner. The panels coated with these solutions were tested. Results are in hours until failure. Failure is defined as the onset of visual corrosion.

	S.H.	S.H. + 4% M-238	Gunk <sup>&amp;</sup> **	Gunk* + 4% M-238
Carbon Steel 1010	48	300+	120	240+
Cast iron	1	72	N.T.*	N.T.
Al. 3003 H14	3	72	N.T.	N.T.
Cast aluminum	N.T.	N.T.	24	120+
Copper	70	150+	96	240+
Galvanized steel	70	150+	N.T.	N.T.

<sup>\*</sup>Not tested

Note: Expect a slight to moderate increase in performance when tested in salt spray environments

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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4119 White Bear Parkway, St. Paul, MN 55110 USA Phone (651) 429-1100, Fax (651) 429-1122 Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com Internet http://www.cortecvci.com

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<sup>\*\*</sup>Gunk® is a hydrocarbon-based automotive engine cleaner manufactured by E.A.C. of Stafford, England.