



## VpCI™ 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 non-ferrous 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, anti-scuff 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)



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Environmentally Safe VpCI™/MCI® Technologies

## 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.

	<b>S.H.</b>	<b>S.H. + 4% M-238</b>	<b>Gunk<sup>A**</sup></b>	<b>Gunk<sup>A</sup> + 4% M-238</b>
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.

\*Not tested

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

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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