



# VpCI™ ADDITIVES FOR COATINGS, FLUIDS, ADHESIVES AND PLASTICS

## M-640 L



### PRODUCT DESCRIPTION

M-640 L is a corrosion inhibiting additive for water and ethylene glycol-based engine heat exchange fluids. It protects ferrous and non-ferrous metals from corrosive contaminants. This product is an excellent replacement for silicates and phosphate/nitrite-based/amine compounds. M-640 L is based on an organic-inorganic formulation designed for low level concentrations in field applications. M-640 L contains a unique combination of contact and vapor phase corrosion inhibitors that provide corrosion protection even in partially filled spaces.

### FEATURES

- Protects ferrous and non-ferrous metals from corrosion and pitting
- Nitrite, chromate, silicate, and heavy metal free
- Contains contact and vapor phase corrosion inhibitors
- Economical
- Use in low dosages
- Environmentally acceptable

### PHYSICAL PROPERTIES

Appearance	Clear yellow liquid
pH	8.5-9.5 (1% solution)
Non-volatile Content	57-67%
Solubility in Water	100%
Density	9.2-9.3 lb/gal(1.10-1.11 kg/l)

### TEST DATA

ASTM D-1384-87 (Standard Test Method for Engine Coolant in Glassware) for engine antifreeze/coolants treated with M-640 L:

*Weight Loss per Specimen (mg)*

Additive	Copper	Brass	Solder
2.5% M-640 L	6-8	1-2	8-9
ASTM D-3306 Requirements	≤10	≤10	≤30
GM 1899 M Requirements	≤10	≤10	≤20
GM 1825 M Requirements	≤10	≤10	≤20

Additive	Carbon Steel	Cast Iron	Aluminum
2.5% M-640 L	1-2	6-10	8-12
ASTM D-3306 Requirements	≤10	≤10	≤30
GM 1899 M Requirements	≤10	≤10	≤20
GM 1825 M Requirements	≤10	≤10	≤20

### TYPICAL APPLICATIONS

M-640 L is an additive to antifreeze/coolant fluids to replace nitrites, phosphates, amines and other types of restricted corrosion inhibitors.

The final concentration range for M-640 L under operating conditions is 2.0-2.5% by weight.

### PACKAGING AND STORAGE

M-640 L is packaged in 5 gallon (19 liter) plastic pails, 55 gallon (208 liter) steel drums, liquid totes and bulk. It should be stored in a tightly closed container. The shelf life is 24 months.



**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**

#### **LIMITED WARRANTY**

All statements, technical information and recommendations contained herein are based on tests Cortec Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed.

Cortec Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec Corporation's obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec Corporation of the claimed defect within six months after shipment of product to customer. All freight charges for replacement products shall be paid by customer.

Cortec Corporation shall have no liability for any injury, loss or damage arising out of the use of or the inability to use the products.

**BEFORE USING, USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE, AND USER ASSUMES ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH.** No representation or recommendation not contained herein shall have any force or effect unless in a written document signed by an officer of Cortec Corporation.

**THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. IN NO CASE SHALL CORTEC CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**



Distributed by:

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](mailto:info@cortecvci.com)  
Internet <http://www.cortecvci.com>

printed on recycled paper  10% post consumer

Revised 5/3/06. Cortec Corporation 2000-2006. Supersedes: 1/17/06  
© 2000-2006, Cortec Corporation. All Rights Reserved. Copying of these materials in any form without the written authorization of Cortec Corporation is strictly prohibited.