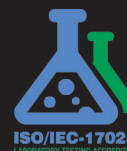
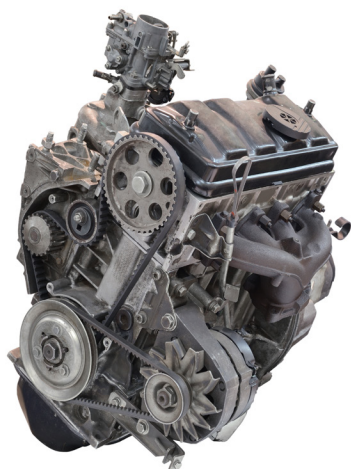




## CORROSION INHIBITING ADDITIVES



# M-529/M-529 L/M-529 SC, Patented Oil Based Corrosion Inhibitor



## PRODUCT DESCRIPTION

M-529 is an oil-based package of corrosion inhibitors for lubricating oils. M-529 provides excellent corrosion protection during operating conditions and intermittent operation.

M-529/M-529 L are very effective for mineral and synthetic based oils: naphthenic, iso-paraffinic, PAOs, etc.

M-529 L additionally contains an EP lubricity package and is recommended for lubricating oil when EP lubricity is needed, such as gears or transmissions.

## FEATURES

- Corrosion protection for ferrous and non-ferrous metals
- Does not contain hazardous barium, chromates, nitrites, or phosphate-based inhibitors
- Provides protection in the presence of chlorides
- When added at recommended concentration to fluids, does not affect pour point and viscosity at low temperatures
- Compatible with most mineral and synthetic oils
- Available in superconcentrate form (M-529 SC)

## TYPICAL APPLICATION

For lubricating oil systems in intermittent operations, add M-529 to oil at a concentration of 2-5% by weight. Add M-529 SC at a concentration of 1.5-3.5% by weight. Add M-529 L at a concentration of 3-6% by weight.

## METALS PROTECTED

- Carbon Steel
- Stainless Steel
- Galvanized Steel
- Aluminum
- Brass
- Copper
- Bronze

## TYPICAL PROPERTIES

| Oil Characteristics                           |              | Typical Values   |
|---|--------------|------------------|
| <b>Appearance</b>                             |              | Dark Amber Color |
| <b>Specific Gravity</b>                       |              | 0.92             |
| <b>Viscosity (ASTM D92)</b>                   | 40 °C        | 185 cSt          |
|   | 100 °C       | 16.5 cSt         |
|   | Index        | 93               |
| <b>Pour Point (ASTM D6749)</b>                |              | -29 °C (-20 °F)  |
| <b>Flash Point (ASTM D92)</b>                 |              | 197 °C (386 °F)  |
| <b>Fire Point (ASTM D92)</b>                  |              | 227 °C (440 °F)  |
| <b>Total Acid Number (ASTM D974)</b>          | mg KOH/g     | 31.3             |
| <b>ISO Particle Count Code</b>                |              | 19/17/13         |
| <b>Oil Separability (ASTM D1401) @ 180 °F</b> | Oil, ml      | 0                |
|   | Water, ml    | 0                |
|   | Emulsion, ml | 80               |
|   | Time, min    | 60               |
| <b>Foaming Characteristics (ASTM D892)</b>    | Seq. I       | 320/30/600+      |
|   | Seq. II      | 650/400/600+     |
|   | Seq. III     | 295/30/600+      |

Properties listed above are typical of those obtained through normal production and do not constitute a specification. M-529 is generally soluble in hydrocarbon based fluids, however compatibility and solubility should be verified prior to use. Please contact Cortec® Technical Service for more information.

## PERFORMANCE PROPERTIES

M-529 is a unique oil additive which effectively prevents corrosion of engines during storage and at the same time decreases high-temperature oxidation and wear of metal in working engines. Carbon steel was tested in extreme humidity, with M-529 as an



additive according to ASTM D-1748, corrosion resistance was provided for 480 hours.

Tested in Castrol Dieselall® SAE 10W30 and SAE 15W40 engine oils, M-529 dramatically improved protection of carbon steel and copper in a humid atmosphere (ASTM D 1748), and protected carbon steel according to the Ball Run Test in acidic conditions.

When tested in the Cummins High Temperature Corrosion Bench Test and Multimetal Cummins Bench Corrosion Test, M-529 caused no adverse affect on chemical and physical parameters of oil.

Field tests in a gasoline-powered V-8 engine confirmed that incorporating M-529 to engine oil reduces the wear of metals and preserves the oil from oxidation.

Exxon Mobil 320 SHS with 4.5% M-529 L passes Load Stage 12 when tested according to ASTM D 5182, Evaluating the Scuffing Load Capacity of Oils (FZG).

## PACKAGING AND STORAGE

M-529 is available in 5 gallon (19 liter) plastic pails, 55 gallon (208 liter) metal drums, liquid totes, and bulk. M-529 should be sealed before storage. The shelf life is up to 24 months.

## STANDARD TEST METHODS

|               |  |
|---------------|--|
| ASTM D-4172   | 4-ball wear test                             |
| ASTM D-665    | Rust Preventing Characteristics              |
| ASTM D-974    | Acid/Base Number by Titration                |
| ASTM D-1401   | Water separability testing                   |
| ASTM D-1748   | Humidity testing                             |
| ASTM D-2196   | Brookfield Viscometer                        |
| MIL-PRF-46002 | Contact and Volatile Corrosion Inhibited Oil |
| MIL-PRF-85062 | VCI Oil for Transmission and Gearbox         |

**FOR INDUSTRIAL USE ONLY**  
**KEEP OUT OF REACH OF CHILDREN**  
**KEEP CONTAINER TIGHTLY CLOSED**  
**NOT FOR INTERNAL CONSUMPTION**  
**CONSULT 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.



**CORTEC**  
CORPORATION

Environmentally Safe VpCI®/MCI® Technologies

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)  
<http://www.cortecvci.com>

Printed on recycled paper  100% post consumer

Revised: 03/15/18. Supercedes: 01/12/17. ©Cortec Corporation 2002-2018 of Cortec Corporation.  
All Rights Reserved. Copying of these materials in any form without the written authorization of Cortec Corporation is strictly prohibited. 2018, ©Cortec Corp. ISO accreditation applies to Cortec's processes only.

Distributed by: