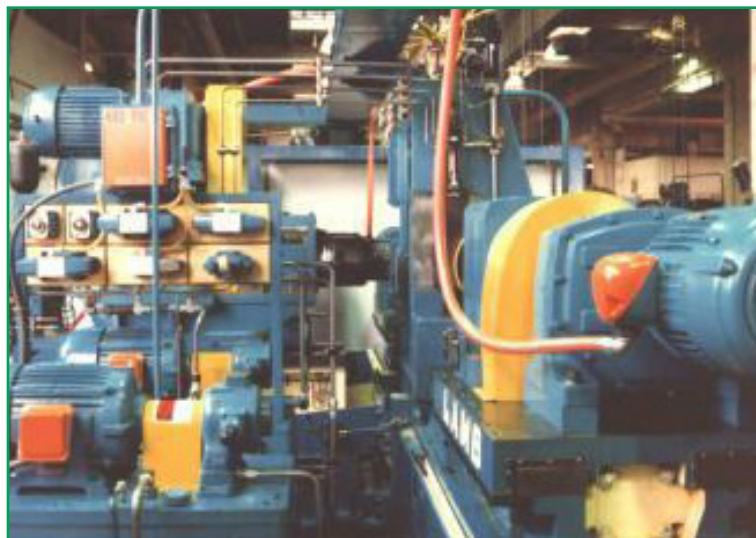


VpCI® METALWORKING PRODUCTS



M-531

Oil Based Corrosion Inhibitor



PRODUCT DESCRIPTION

M-531 is an oil-based package of corrosion inhibitors for petroleum and synthetic lubricants. M-531 provides outstanding non-staining properties with excellent demulsibility and filterability.

M-531 is effective in a variety of lubricant base stocks.

FEATURES

- Excellent rust inhibitor
- Excellent non-staining properties
- Excellent filterability
- Can be used in hydraulic applications
- When added at recommended concentration to hydraulic fluids, does not affect emulsification, pour point, or viscosity at low temperatures
- Compatible with most mineral and synthetic oils
- Suitable for both operating and intermittent use conditions
- Resists gelling when contaminated with water

TYPICAL APPLICATION

M-531 can be used in a wide variety of industrial lubricant applications where excellent rust protection, filterability, and water resistance are required. In rust preventive applications it is particularly useful for coiled steel or stacked parts due to its outstanding non-staining properties.

M-531 is highly recommended for use in hydraulic fluids. M-531 is also ideally suited for formulating paper machine oils and circulating oils where good filterability, anticorrosion, thermal stability, and demulsification properties are required.

SOLUBILITY

Soluble in petroleum and synthetic lubricant base stocks and most common solvents. Insoluble in water. However, it is recommended to verify the solubility in the base oils used and the compatibility with other additives. Please contact Cortec® Laboratories for compatibility test results.

METALS PROTECTED

- Carbon steel
- Copper
- Solder
- Stainless steel
- Cadmium
- Tin
- Galvanized steel
- Magnesium
- Lead
- Aluminum
- Silver
- Bronze
- Brass
- Zinc



TYPICAL PROPERTIES

Oil Characteristics		Typical Values
Appearance		Amber Color
Specific Gravity		0.94
Viscosity (ASTM D92)	40 °C	148 cSt
	100 °C	12.9 cSt
	Index	74
Pour Point (ASTM D6749)		-24 °C (-11 °F)
Flash Point (ASTM D92)		139 °C (282 °F)
Fire Point (ASTM D92)		212 °C (413 °F)
Total Acid Number (ASTM D974)	mg KOH/g	32.7
ISO Particle Count Code		21/20/15
Oil Separability (ASTM D1401) @ 82 °C (180 °F)	Oil, ml	35
	Water, ml	0
	Emulsion, ml	45
	Time, min	60
Foaming Characteristics (ASTM D892)	Seq. I	25/0/62
	Seq. II	70/0/22
	Seq. III	240/15/600+

Properties listed above are typical of those obtained through normal production and do not constitute a specification. M-531 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.

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

PACKAGING AND STORAGE

M-531 is available in 5 gallon (19 liter) plastic pails and 55 gallon (208 liter) metal drums. Also available in 1 quart (946 ml) bottles.

Store in a cool, less than 115°F (46°C), dry place away from any direct source of heat and moisture. M-531 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

LIMITED WARRANTY

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