

## VCI-F OIL

### VAPOR PHASE CORROSION INHIBITOR CAT 1E 2359 CERTIFIED VCI OIL

#### PRODUCT DESCRIPTION

**VCI-F Oil** is a vapor phase corrosion inhibitor and flushing fluid, which should be used to protect internal tanks from corrosion, flush tanks to disperse debris and offer protection for the external surfaces of parts. It contains less than 15 ppm sulfur and is compatible with fuel, lubricating and hydraulic oils. VCI-F Oil contains a special low pour point synthetic ester contact inhibitor blend, which will not varnish, harden or react with cleaner residues left in systems. The volatile corrosion inhibitor blend will protect the head space in “closed systems” such as: engines, transmissions, hydraulic tanks and cylinders, gear housings, fuel tanks and steel drums. The duration of the vapor phase protection provided depends on how well the tank is sealed. Protection for several years can be achieved if the tank is hermetically sealed or bagged with LDPE (>0.125mm thick) plastic and sealed. For incompletely sealed systems periodic endoscope inspection and possible re-application may be required.

#### PRODUCT BENEFITS

- Certified CAT 1E 2359 CORROSION PREVENTATIVE VCI OIL
- VCI-F Oil is often used to protect sheet metal stampings, spare parts, etc. if sealed in >0.125mm LDPE bags.
- VCI-F Oil is distinguishable from conventional preservative oils as it gives both vapor phase and contact corrosion protection.
- VCI-F Oil is particularly effective in fuel tanks, hydraulic tanks and ferrous components while in transit or in temporary storage. VCI-F Oil is designed to lift, displace and encapsulate adsorbed water and washer residue from the surface to protect the tank from corrosion and staining.

#### PRODUCT APPLICATION



#### COMPATIBLE METALS

Cast Iron  
Carbon Steel  
Tool Steel  
Stainless Steel  
Aluminum  
Bronze  
Copper  
Brass  
Magnesium  
Zinc

#### TYPICAL USES

Fuel Tanks  
Engines  
Hydraulic Tanks & Cylinders  
Gear Housings  
Steel Drums

#### PROTECTION PROPERTIES

	Test	DFT	20 Ra (Smooth) 1010 Carbon Steel Panels
Humidity	ASTM D 1748	1 mil (25 μ)	500 hours
Water Fog	ASTM D 1735	1 mil (25 μ)	48 hours
Salt Fog	ASTM B117	1 mil (25 μ)	3 hours
Cyclic	SAE J 2334	1 mil (25 μ)	10 hours

## TYPICAL PROPERTIES

Fluid Type	Oil based
Appearance	Clear liquid
Odor	Mild amine
Specific Gravity, 60°F (15.6°C)	0.856
Weight, lb/gal., 60°F (15.6°C)	7.5
Flash Point (COC)	385°F (196°C)
Viscosity (100°F)	105 SUS
Viscosity (212°F)	38.5 SUS
Viscosity (40°C)	19.9 cSt
Viscosity (100°C)	4.0 cSt
Viscosity Index	34
Pour Point	-67°F (-55°C)
VOC in grams/Liter	70

## DIRECTIONS FOR USE

Adequate protection is achieved at 0.2 to 0.8% volume of VCI-F liquid/volume of internal tank space. The tank should be as dry as possible before the addition of VCI-F Oil. To ensure optimal protection, it is preferred that the oil is fogged into the tank using a 360° pole gun atomizer or wand. After application, if possible, the tank should be rotated 360° from both axes for maximum wetting with at least 10 microns of oil film thickness per square centimeter. This is especially critical in the top portion of the inside of the tank since the top portion of the tank is the most critical area. Be aware of baffles within the tank which may inhibit adequate coverage. Using an endoscope to confirm that coverage of VCI-F Oil in the tank is adequate is a way to minimize potential corrosion issues. After coverage, the fuel can be added.

## TOXICITY

VCI-F Oil is composed of highly refined petroleum distillate and a nontoxic synthetic ester blend. The product contains a relatively small amount of a volatile substance which may be irritating to eyes, skin and mucous membranes. Prolonged exposure to the vapors should be avoided. Consult the SDS for more details.

## STABILITY

VCI-F Oil is unaffected by ambient temperatures and remains stable (and effective) indefinitely as long as kept indoors in a vapor-tight container. The material should always be placed in a closed container to minimize escape of the Volatile Corrosion Inhibitor.

## EFFECT ON NON-METALLIC MATERIALS

VCI-F Oil has little to no effect on rubber, painted surfaces, or plastics. Should a question arise, however, because of the wide variance in composition of these materials, immerse the specimen in a container of VCI-F Oil and maintain at 130°F (55°C) in an oven for 72 hours. Examine the specimen for visible signs of change.

## PRODUCT NUMBER

8434A00000

## HEALTH AND SAFETY

For health and safety guidance, please refer to the Chemtool SDS (Safety Data Sheets).