



VpCI™ METALWORKING PRODUCTS

VpCI™-316



PRODUCT DESCRIPTION

VpCI-316 is a water-based corrosion preventive concentrate designed to replace corrosion inhibiting oils for copper. When diluted with water before application, VpCI-316 produces a corrosion inhibiting and lubricating film, offering barrier and vapor phase corrosion protection.

VpCI-316 is a corrosion inhibitor that is completely soluble in water. VpCI-316 produces a very thin, transparent, tack-free film on the metal surface. The film produced is a unique synthetic lubricant which provides resistance to scratching and mechanical damage of finely machined parts. It is non-toxic, environmentally friendly and does not contain nitrite or phosphate inhibitors. VpCI-316 also provides sufficient lubrication for stamping and cutting processes.

VpCI-316 is supplied in concentrate form and is effective in a variety of dilutions from 2-30% in water. This wide dilution range allows VpCI-316 to provide excellent Vapor phase Corrosion protection for 1 to 24 months in the most economical way for a variety of applications.

In addition, VpCI-316 can help reduce or eliminate shipping, warehousing, disposal and removal expenses. In most applications, VpCI-316 will not need to be removed prior to welding or further processing.

The most unique property of VpCI-316 is that it contains Vapor phase Corrosion Inhibitors (VpCI™) capable of protecting uncoated and unreachable surfaces such as stacks, coils, bundles, or packages.

FEATURES

- Replaces oils / solvent-based compounds
- Reduces the cost of protection when compared to oil / solvent-based inhibitors
- Eliminates fire hazard associated with oil / solvent-based compounds
- Contains non-toxic Vapor phase Corrosion Inhibitors (VpCI)
- Protects metals through a unique vapor phase action
- Prevents scratching and mechanical damage of plated and painted products and sticking of pre-painted coiled steel and sheets
- Environmentally friendly and containing no nitrites, phosphates, nor silicones
- Can be removed with water or any standard cleaning technique, if necessary
- Provides excellent protection for copper and brass
- Also available with UV additive

TYPICAL APPLICATIONS

RAW METAL PROCESSING/STORAGE/SHIPPING

Use VpCI-316 after pickling, temper rolling or prior to shipping in place of slushing oils. VpCI-316 is ideal for protection of coils and sheets for customers requiring "dry" or uncoiled copper or brass.

METALWORKING/MANUFACTURING

Any metal part, component, or assembly, between processing steps or in storage/transfer, can be protected without the health, fire, or disposal hazards of oils or phosphate coatings. Uses vary from miniature bearings, brass cartridges or metal furniture to larger earth-moving or agricultural machinery. VpCI-316 is ideally suited for indoor protection of metals subject to handling and assembly where dry-to-touch film quality, ease of removal and plant cleanliness are important requirements.

HYDROSTATIC TESTING/MOTHBALLING

(pumps, vessels, tubing, tanks, boilers)

Use a small percentage of VpCI-316 to ensure protection during storage/shipping without expensive drying, nitrogen blanketing, desiccants or heaters.

PACKAGING/SHIPPING

Any covered or packaged product can be protected effectively and economically. The product appearance is improved rather than degraded, and customer acceptance is excellent, since no degreasing is required. Products arrive rust-free and ready-to-use. Service requirements due to corrosion are diminished, resulting in significant savings for the manufacturer.

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

METALS PROTECTED

- Brass (<30% Zn)
- Silver
- Copper
- Copper-Nickel Alloys

TYPICAL PROPERTIES

| | |
|----------------------|--------------------------------|
| Appearance | Clear yellow liquid |
| Flash Point | >200°F (93°C) |
| Non-volatile Content | 24-29% |
| Odor | Mild |
| pH | 7.5-8.5 (Neat) |
| Density | 8.7-8.9 lb/gal (1.04-1.07kg/l) |

METHOD OF APPLICATION

Apply by spray, brush or dip. For high production operations, dip parts into a solution of the inhibitor. Typical coating weight recommended with VpCI-316 is 20-60 mg/ft² (0.2-0.6 g/m²). VpCI-316 is designed for protection of metals indoors or in direct exposure to outdoor elements. VpCI-316 is mixed with water in the following proportions:

Short-term protection (1-6 months):
1 part concentrate to 20 parts water

Medium-term protection (6-12 months):
1 part concentrate to 15 parts water

Long-term protection (up to 24 months):
1 part concentrate to 9 parts water

STORAGE AND PACKAGING

VpCI-316 is available in 5 gallon (19 liter) plastic containers, 55 gallon (208 liter) metal drums. The product should be stored sealed in a heated warehouse to avoid freezing. VpCI-316 has a shelf life of up to 24 months.

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.

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