



# VpCI®-377/ 377 Winterized



## PRODUCT DESCRIPTION

VpCI-377 is a water-based concentrate designed as a complete replacement for oil-based preventives for indoor protection of equipment and components. VpCI-377 is a corrosion preventive liquid that meets tough anti-pollution requirements. The wide dilution range with water (0.5-20%)\* allows flexibility to customize the length of protection required and the applied cost per square foot (or m<sup>2</sup>).

VpCI-377 forms a solution in water and is applied to metal surfaces by spraying or dipping. VpCI-377 does not need to be removed, but if necessary, can be removed with conventional alkaline cleaners, such as Cortec's VpCI-410 series.

VpCI-377 is also available in a cold weather version. VpCI-377 Winterized has a lower freezing point for the convenience of application and storage in cold temperatures.

*\*Contact Cortec Representative for dilution recommendations.*

## FEATURES

- Protects ferrous and non-ferrous metals
- Water-soluble, environmentally friendly, and safe to apply
- Prevents flash corrosion on cold-rolled steel
- Very stable in hard water
- Extends shelf-life of finished product
- Will not clog filtration systems
- Forms a clear, dry, hydrophobic film which renders an attractive appearance to protected parts
- Vapor phase action protects uncoated surfaces and difficult to reach areas
- Easy to remove if necessary
- Nitrite- and phosphate ester-free
- Non-flammable
- Dry film is stable up to 350°F (176°C)
- Passes ASTM D-4627-86 (Test Method for Iron Chip Corrosion for Water-soluble Metalworking Fluids) at 2% by weight
- Excellent wetting properties
- Free of hazardous amines
- No hazardous decomposition by-products
- Can be coated over with conventional paint systems

## TYPICAL APPLICATIONS

Thin film coating for dry storage of:

- Castings, tubular parts, finished parts, gears
- Pumps and housings
- Textile and printing equipment
- Structural steel, sintered metals
- Bars and roll stock
- Additive to parts, washers, and rinse water systems
- Hydroblasting and hydrotesting

Spraying or dipping on metal surfaces will provide sheltered or indoor protection.



## METALS PROTECTED

- Carbon steel
- Aluminum
- Stainless steel
- Copper
- Galvanized steel

## APPLICATION

*Product Preparation:*

Add VpCI-377 to water and mix thoroughly. Spray, dip, or use in parts washers and rinse tanks. Solution concentration can be monitored by a refractometer, pH and titration methods.

The pH of VpCI-377 needs to be above 8 in order to be effective.

## TYPICAL PROPERTIES

### VpCI-377

Appearance	Clear dark brown or black liquid
Film Type	Dry, clear
Non-volatile Content	40-47%
pH	8.0-9.5 (Neat)
Density	8.7-9.2 lb/gal (1.04-1.10 kg/l)
BOD/COD (2.5% solution in water, 28 days)	0.48
Corrosion Resistance	Up to 24 months indoors

### VpCI-377 Winterized

Appearance	Clear amber liquid
Film Type	Dry, clear
Non-volatile Content	38-48%
pH	8.5-8.9 (Neat)
Density	8.8-9.2 lb/gal (1.05-1.10 kg/l)
Carrier	Water + Ethylene glycol
Freeze point	-18.4°F (-28°C)
Corrosion Resistance	Up to 24 months indoors

## STORAGE AND PACKAGING

VpCI-377 is available in 5 gallon (19 liter) pails, 55 gallon (208 liter) drums, liquid totes, and bulk. The product should be stored sealed in a heated warehouse to avoid freezing.

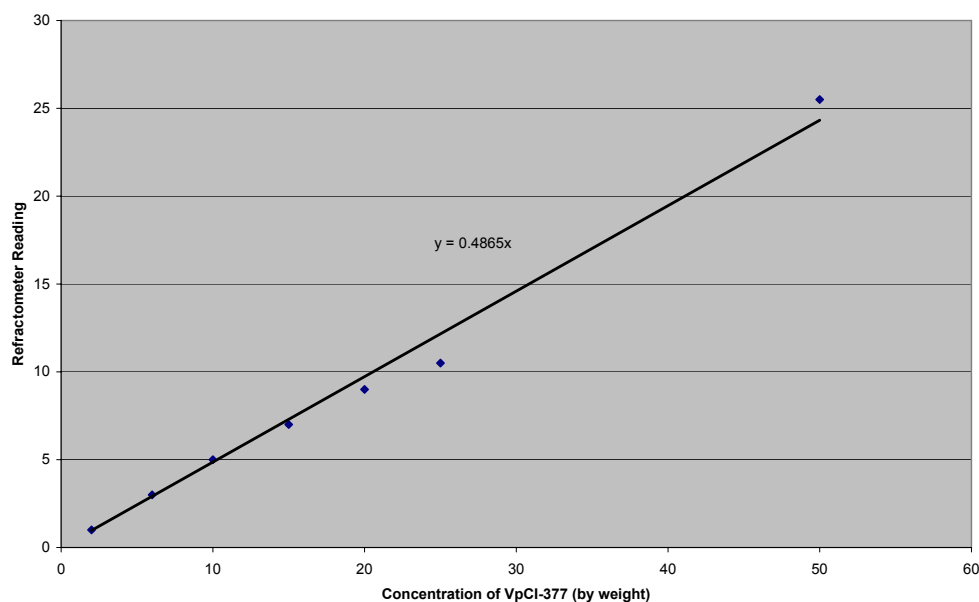
VpCI-377 Black in 5 gallon (19 liter) pails is available upon request.

VpCI-377 Winterized is available in 5 gallon (19 liter) pails, 55 gallon (208 liter) drums, liquid totes, and bulk.

VpCI-377 is also available in EcoAir® compressed air cans (12 oz. / 340 g) bottles.

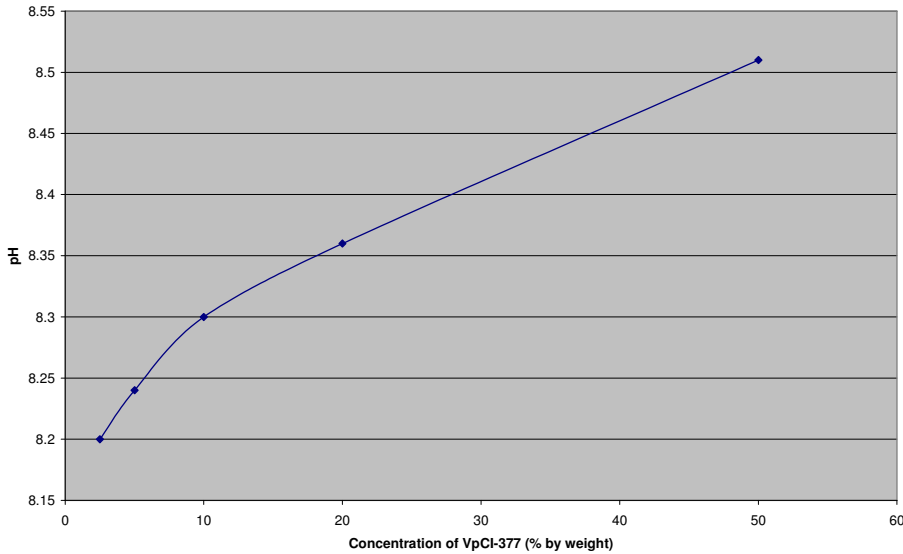
Shelf life is 24 months.

Refractometry Curve for VpCI-377



These data were measured using a Reichert R2 Mini handheld digital refractometer. We would recommend using this model or similar.

VpCI-377 pH Chart



Please note that the solutions above were created using deionized water. Slight differences in water chemistry (hardness, dissolved solids, etc) may lead to differences in readings. As such, please use these numbers only as reference. Contact Cortec Laboratories with any questions.

**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**

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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>

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