



## Product Bulletin

Better Chemistry. **Better Business.**

**Metal Guard® 678**

**Product Code: 2506078**  
**Revised Date: 06/19/2008**

### **Metal Guard® 678** Clear Resin Dry Film Coating

**Metal Guard® 678** is a colloidal suspension of acrylic polymers in water, designed for effective protection of a variety of substrates. Its performance is similar to solvent-based systems without the accompanying fire hazards of solvent-based systems. **Metal Guard® 678** is especially formulated to coat over lightly oiled metal surfaces, leaving a high-gloss, dry hard film when used as directed and has good humidity resistance.

#### **RECOMMENDED USE**

**Metal Guard® 678** is recommended for use on all metal surfaces where additional durability and protection are required. Even over lightly oiled surfaces which have not been degreased, the application of **Metal Guard® 678** will provide exterior protection against rust for 3 to 6 months. It can also be applied over galvanized parts to help prevent white rust.

Use of **Metal Guard® 678** for unstated applications should be determined by the end user prior to actual production use.

#### **APPLICATION DATA**

**Metal Guard® 678** can be applied to parts by dipping, flow coating, spraying (conventional or electro-static), brushing or wiping. When applying over lightly oiled, uncleaned surfaces, a sample part should be tried to determine adhesion and film forming properties. Since there are various types of oils containing additives, it is necessary to predetermine the compatibility. Generally, the presence of oil on the surface to be coated (unless excessive) will not interfere with the adhesion or film forming properties of **Metal Guard® 678**.

Since the product is designed to dry quickly, all necessary precautions should be taken to prevent build-up in flow coating or spraying equipment.

#### **SPRAY APPLICATION**

The viscosity of **Metal Guard® 678** can be increased with careful addition of either a 1:1 mixture of butyl cellosolve and water, or a 1:7 mixture of ammonia and water.



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**PHYSICAL DATA** (Based on typical analysis):

pH.....	8.4 - 8.6
Solids.....	20%
Flash Point.....	Over 180°F non-flammable (tag closed cup)
Weight per gallon.....	8.37 lbs. @70°F.
Temperature Stability .....	40°F. - 100°F (damaged by freezing)
Film Thickness.....	.3 - .4
Coverage.....	1,000 - 2,000 sq ft/gal
Dry Time @70°F.....	15 minutes
Dry Time @125°F.....	8 minutes
Viscosity .....	20 cps.
Appearance .....	Milky Emulsion
Film Hardness, Aged.....	2H
Flexibility.....	Pass 1/8" bend
Exterior Durability .....	3-6 months
Gasoline Resistance.....	Poor

Certain copper alloys are subject to stress corrosion by ammonia and amines. Product contains amines. Product may stain some aluminum and copper alloys. Testing is recommended before using.

**DILUTION**

**Metal Guard® 678** can be reduced with tap water to give thinner films. If more than a pint of water per gallon is required, the reducing solvent should be a blend of 4 parts of water and 1 part of butyl cellosolve. Reduction in solids will reduce the durability.

**STOP OFF/MASKANT FOR BLACK OXIDE**

**Metal Guard® 678** is an effective maskant/stop off for steel parts that will be black oxidized. It will effectively prevent the blackening of masked areas when parts are blackened with hot alkaline black oxide solutions or acidic room temperature blackening solutions.

**Metal Guard® 678** may be applied to the parts by immersion or brush painting. The applied coating of **Metal Guard® 678** should be allowed to cure at room temperature for 24 hours prior to blackening. Parts may be oven cured at 150°F for 2 hours to accelerate polymerization of the film.



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### **REMOVABILITY**

**Metal Guard® 678** is designed for additional durability and adhesion, and can be removed with most paint strippers and the recommended Stripper 680, Product code 2572001.

### **DRYING**

Drying time depends upon temperature, humidity and air flow. At 75°F. and 45% relative humidity, **Metal Guard® 678** dries to the touch in approximately 10 minutes when applied at full strength. Forced ambient air and/or dilution will decrease the drying time.

### **WARRANTY**

THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.