Metal Guard® 660

Metal Guard 660 is a colloidal suspension of styrene-acrylic polymers in water, designed for effective protection of a variety of substrates. Its performance is like solvent-based systems without the accompanying fire hazards of solvent-based systems. Metal Guard 660 is especially formulated to coat over lightly oiled metal surfaces, leaving a high-gloss, dry hard film when used as directed.

Metal Guard 660 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 660 will provide exterior protection against rust for 3 to 6 months. It can also be applied over galvanized parts to help prevent white rust.

Features & Benefits

Non-flammable	Improved safety
Fast drying	Shorter processing time
Abrasion resistance	Improved final finish
Easily removed in an alkaline cleaner	Easy to repair errors

Physical Data

pH	8.4 – 8.6
Solids	20%
Flash point	Over 180°F non-flammable (tag closed cup)
Weight per gallon	8.37 lb @70°F
Temperature Stability	40°F – 100°F (damaged by freezing)
Film thickness	1,000 – 2,000 ft^2/Gal
Coverage	15 min
Dry time @ 70°F	8 min
Dry time @ 125°F	20 cps
Viscosity	Milky emulsion
Appearance	3 – 6 months

Exterior Durability	Poor
Gasoline resistance	

Typical Applications

- Final rust preventative after Black Magic coatings, even while still wet from the final rinse.
- Final rust preventative after Hubbard Hall's Mi-Phos zinc phosphate or manganese phosphate coatings.
- Recommended for use after machining or cleaning operations.

Operating Conditions

Metal Guard 660 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 660.

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

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.

<u>Dilution</u>
Metal Guard 660 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 cello solve. Reduction in solids will reduce the durability.

The viscosity of Metal Guard 660 can be increased with careful addition of either a 1:1 mixture of butyl cello solves and water, or a l:7 mixture of ammonia and water.

<u>Stop off/maskant for black oxide</u>
Metal Guard 660 is an effective maskant/stop off for steel parts that will be black oxide. 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 660 may be applied to the parts by immersion or brush painting. The applied coating of Metal Guard 660 should be allowed to cure at room temperature for 24 hours

prior to blackening. Parts may be oven cured at 150ºF for 2 hours to accelerate polymerization of the film.

Removability
Metal Guard 660 is designed for additional durability and adhesion, and can be removed with suitable chlorinated solvents, most glycol ethers, or aromatics

Drying
Drying time depends upon temperature, humidity and air flow. At 75°F and 45% relative humidity, Metal Guard 660 dries to the touch in approximately 10 minutes when applied at full strength. Forced ambient air and/or dilution will decrease the drying time.

Caution

Protect eyes from solution. In event of contact, flush eyes thoroughly with water and obtain medical help.

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Our People. Your Problem Solvers.

For more information on this process,
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