



**METALMAX® PLUS  
HIGH GLOSS DTM ACRYLIC ENAMEL**

**DESCRIPTION AND USES**

The MetalMax® Plus DTM Urethane Modified Acrylic is a high gloss, zero VOC, zero HAP, single component, water-based urethane modified acrylic. This coating is designed for direct to metal (DTM) application to steel surfaces in mild to moderate industrial environments. It can be used on galvanized steel, aluminum, and other metals in both interior and exterior applications. Since this coating is very low odor during application, it is ideal for use in schools, healthcare facilities, food service areas, office buildings, hotels or in any area where odors are an issue.

**PRODUCTS**

| 1-Gallon | 5-Gallon | Description            |
|----------|----------|------------------------|
| 264164   | 264198   | White Pastel Tint Base |
| 264176   | ---      | Tint Base              |
| 264170   | ---      | Deep Tint Base         |
| 264173   | 264201   | Accent Tint Base       |
| 264186   | 264208   | Black                  |
| 264182   | ---      | Safety Red             |
| 264183   | 264207   | Safety Yellow          |
| 264179   | 264204   | White                  |
| 264184   | ---      | Safety Blue            |
| 264185   | ---      | Navy Gray              |
| 264188   | ---      | Clear Gloss            |
| 238755   | ---      | Gray Primer*           |

\* Use the Gray Primer to optimize corrosion protection or to provide a base coat when coating substrates which have varying color. This will help ensure a uniform final appearance.

**PRODUCT APPLICATION**

**SURFACE PREPARATION**

**ALL SURFACES:** Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with Pure Strength® Cleaner/Degreaser item #3599402, commercial detergent or other suitable cleaner. Mold and mildew must be cleaned with a chlorinated cleaner or bleach solution. Rinse thoroughly with fresh water and allow to fully dry. All surfaces must be dry at time of application.

**STEEL:** At minimum, Hand Tool (SSPC-SP-2) or Power Tool (SSPC-SP-3) clean to remove all loose rust, mill scale, and deteriorated previous coatings. If abrasive blast cleaning is done, the blast profile should not exceed 1-2 mils (25-50µ). Abrasive blast cleaned steel requires two coats of primer.

**GALVANIZED STEEL:** New galvanized steel should be solvent cleaned to remove all post galvanizing treatments such as oil, grease or wax. Old or existing galvanized steel should be thoroughly washed to remove all surface contaminants.

**PREVIOUSLY COATED:** Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding to create a surface profile. The Metalmax Plus Acrylic Enamel is compatible with most coatings, but a test patch is suggested.



## TECHNICAL DATA

# METALMAX® PLUS HIGH GLOSS DTM ACRYLIC ENAMEL

### PRODUCT APPLICATION (cont.)

#### APPLICATION

Apply only when air and surface temperatures are between 50-100°F (10-38°C) and surface temperature is at least 5°F above dew point. The relative humidity should not be greater than 85%. Be aware of surface temperature when ambient air temperature is above 90°F (32°C). The coating should not be applied if the surface temperature is 100°F (38°C) or greater. Ensure fresh air entry during application and drying. The Metalmax Plus can be applied direct to metal on clean substrates. The Gray Primer should be used to optimize performance on sound rusted steel. Use the Gray Primer to optimize corrosion protection or to provide a base coat when coating substrates which have varying color. This will help ensure a uniform final appearance.

#### TINTING

The Metalmax Plus tint bases can be tinted with Rust-Oleum 2030 Water-based Colorants or other high quality water-based or universal colorants, however these colorants will slightly increase VOC, but if used at the recommended levels, the VOC will not exceed 100 g/l. Use COLORTREND® PLUS 808 colorants to maintain zero VOC.

White Pastel Base accepts 2 oz. of tint.

Tint Base accepts 4 oz. of tint.

Deep Base accepts 8 oz. of tint.

Accent Base accepts 12 oz. of tint.

#### EQUIPMENT RECOMMENDATIONS

BRUSH: Use a good quality synthetic bristle brush.

ROLLER: Use a good quality synthetic nap roller cover.

AIR-ATOMIZED SPRAY:

| Method      | Fluid Tip   | Fluid Delivery | Atomization   |
|-------------|-------------|----------------|---------------|
| Pressure    | 0.055-0.070 | 12-16 oz./min. | 40-60 psi     |
| Siphon      | 0.055-0.070 | —              | 40-60 psi     |
| HVLP (var.) | 0.043-0.070 | —              | 10 psi at tip |

Air cap for highest pressure

AIRLESS SPRAY:

| Fluid Pressure | Fluid Tip   | Filter Mesh |
|----------------|-------------|-------------|
| 2000-3000 psi  | 0.013-0.017 | 100         |

#### THINNING

If needed thin with clean, fresh water. Do not exceed 4 fl. oz./gal.

#### CLEAN-UP

Clean up with soap and water and dispose of all waste material in a proper manner and in accordance with local waste regulations. Consult with local environmental regulations for appropriate method of disposal and/or recycling of paint and empty container.

### PERFORMANCE CHARACTERISTICS

#### SCRUB RESISTANCE

METHOD: ASTM D2486

RESULT: 200 cycles

#### WASHABILITY

METHOD: ASTM D4828

RESULT: 5

#### CONICAL FLEXIBILITY

METHOD: ASTM D522

RESULT: 180° on 1/8" Mandrel

#### PROHESION (1 coat DTM)

Rating 1-10 10=best

METHOD: ASTM D5894, 500 hours

RESULT: 10 per ASTM D714 for blistering

RESULT: 5 per ASTM D1654 for corrosion

RESULT: 9 per ASTM D610 for rusting

#### IMPACT RESISTANCE (direct)

METHOD: ASTM D2794

RESULT: >240lbs.

#### GLOSS AT 60\*\*

METHOD: ASTM D523

RESULT: 70-90%

#### FADE RESISTANCE

METHOD: ASTM 4587, 500 hours

RESULT: ΔE = 0.70

#### CROSSHATCH ADHESION

METHOD: ASTM D3359

RESULT: CRS - 5B

Aluminum - 5B

Galvanized Steel - 3B

#### HIDING POWER

METHOD: ASTM D2805

RESULT: 0.99

\*\* Average results between white and black. Values are representative of typical performance for all colors.



## TECHNICAL DATA

# METALMAX® PLUS 1K HIGH GLOSS DTM ACRYLIC ENAMEL

### PHYSICAL PROPERTIES

|  |             |  |
|--|-------------|--|
| Resin Type   |             | Urethane modified Acrylic                            |
| Pigment Type   |             | Varies with color                                    |
| Solvents   |             | Water  |
| Weight   | Per Gallon  | 8.6-10.2 lbs.  |
|  | Per Liter   | 1.03-1.22 kg   |
| Solids   | By Weight   | 36.1-39.0%   |
|  | By Volume   | 38.7-39.6%   |
| Volatile Organic Compounds   |             | 0.0 g/l  |
| Recommended Dry Film Thickness (DFT) Per Coat  |             | 1-3 mils<br>(25-75 $\mu$ )                           |
| Wet Film to Achieve DFT  |             | 2.5-7.5 mils<br>(62.5-187.5 $\mu$ )                  |
| Theoretical Coverage at 1 mil DFT (25 $\mu$ )  |             | 640 sq. ft./gal.<br>(15.8 m <sup>2</sup> /l)         |
| Practical Coverage at Recommended DFT (assumes 15% material loss)<br>Use this value for material quantity estimate |             | 180-545 sq. ft./gal.<br>(4.4-13.4 m <sup>2</sup> /l) |
| Dry Times at 77°F (25°C) and 50% Relative Humidity   | Touch       | 30 minutes   |
|  | Handle      | 60 minutes   |
|  | Recoat      | 60 minutes   |
|  | Full Cure   | 7 days   |
| Dry Heat Resistance  |             | NA   |
| Shelf Life   |             | 3 years  |
| Flash Point  |             | >200°F (93°C)  |
| Storage Information  |             | Protect from freezing                                |
| Safety Information   | Formulation | Lead-free/Solvent-free                               |
|  | Warning!    | See MSDS for information                             |

Calculated values are shown and may vary slightly from the actual manufactured material.

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