PROTECH High Performance Finishes

Metal Master™ DTM

ACRYLIC ENAMEL SATIN/EGGSHELL - *(4387Series)*
ACRYLIC ENAMEL SEMIGLOSS - *(4587 Series)*

DESCRIPTION

Metal Master™ DTM is a **high performance**, single component, **Low VOC**, waterborne acrylic**,** Direct-To-Metal coating with **exceptional** adhesion and toughness that is complimented with a quality **self-priming** finish.

Metal Master DTM is designed for both interior and exterior applications affording stellar gloss & color retention properties. This universal DTM coating provides both, functionality and aesthetic value in a **low odor**, **non-flammable**, **fast-drying, washable, scrub resistant** formulation.

This product has **excellent** resistance to humidity and corrosion, in addition to offering **early** moisture resistance with **superior** flow & leveling, an **exceptionally** hard-wearing finish and **great** block resistance for Commercial and Industrial applications. Suitable for use in USDA Inspected Facilities.

Metal Master DTM is easy to apply, forming a tough film that provides **outstanding** resistance to weathering and UV exposures.

INTENDED USE:

- With exceptional bonding and flash rust resistance this product is designed to be applied over a wide variety of substrates including metals, fiberglass, interior wood, concrete/masonry, drywall and pre-finished siding.
- Great for New Construction and Maintenance projects requiring High Performance protection and durability.

COATING PROPERTIES

Coating Category	Waterborne Acrylic
Package Size	Available in **one** gallon and **five** gallon pails
Mix Ratio	N/A – Single Component 1K
Viscosity (Mixed) - KU	85-95 KU's (GL3) **|** 85-95 KU's (GL5)
Recommended Film Thickness (per coat): Wet Film Dry Film	GL3/Eggshell **|** GL5/SemiGloss 4.0 – 8.0 mils. 4.5 – 8.5 mils 1.5 – 3.0 mils. 1.5 – 3.0 mils

TEST RESULTS

Substrate: Steel	**Surface Preparation:** Steel SSPC-SP-10, Primed with Metal Master Primer	**Cure Time:** 7 Days
TEST/ATTRIBUTE	**TEST METHOD**	**RESULT**
Adhesion*	ASTM D4541, >500psi	Pass
Flexibility*	ASTM D522, 180° bend, 1/8" mandrel	Pass
Pencil Hardness*	ASTM D3363	2B
Direct Impact Resistance*	ASTM D2794, >175 lb.	Pass
Early Water Resistance**	ASTM D4587, in 4 hrs.	Pass per ASTM D358
Humidity Resistance	ASTM D4585, 1156 hours	Pass
Accelerated Weathering**	ASTM D4587, QUV-A, 504 hrs.	Pass
Corrosion Weathering	ASTM D5894, 10 cycles	Rating 10, per ASTM D714 for blistering Rating 9, per ASTM D1654 for corrosion
Dry Heat Resistance*	ASTM D2485, 300F	Pass
Salt Fog Resistance	ASTM B117, 500 hours	Pass
Scrubbability**	ASTM D2486, 4000 cycles	Pass
Biological Growth**	ASTM D3273, 4 weeks	Pass per ASTM G-21-96

Note: *CRS Panel Substrate; **MPI test method Substrate

CERTIFICATIONS:

MPI Approvals – **#161, 163**
Meets SCAQMD and LEED v.4 VOC restrictions

MARKETS / END-USES:

- Exterior Structural Steel
- Facility Maintenance
- Ornamental Steel
- Miscellaneous Metals
- Dry Goods Containers
- HVI Maintenance
- Buildings & Warehouses
- Machinery & Equipment
- New Construction
- Manufacturing Facilities
- Healthcare
- Education
- OEM
- Storage Tanks & Piping
- Food Processing & Commercial Kitchens
- USDA Inspected Facilities

SUBSTRATES:

- Pre-Painted Surfaces
- Ferrous Metals
- Non-Ferrous Metals
- Fiberglass
- Wood (interior)
- Concrete/Masonry
- Gypsum Wallboard (interior)

PRODUCT WEIGHT:

GL3: 10.57 lb. per gallon
GL5: 10.05 lb. per gallon

SKU# & VOC INFORMATION:

Bases **VOCs (g/L)**

Satin/Eggshell **<100g//L***
Low Gloss, Rich Appearance, High Durability, Easy to Clean, Ideal for High Traffic areas
438701 – White Base
438703 – Deep Base
438704 – Neutral Base

SemiGloss **<100g//L***
Higher Gloss, Maximum Durability, Ideal for Higher Moisture areas and Areas that Take a Lot of abuse
458701 – White Base
458703 – Deep Base
458704 – Neutral Base

* without Tint colorant
Tinting with colorants changes the VOC

TINT COLORANT TYPE:

For Maximum Durability use 896 Colorants

COVERAGE INFORMATION

Mixed Volume Solids (May vary by Base & Color)	GL3: 38% +/- 2% | GL5: 35% +/- 2%
Finish: Gloss Sheen	**GL3 (Satin/Eggshell)** 10 – 25 @ 60°, GL 3 15-35 @ 85° **GL5 (Semi-Gloss)** 45 – 65 @ 60°, GL 5 N/A
Coverage	560 - 610 Sq. ft./gal @ 1.0 mil DFT **Note**: Actual coverage may vary depending on Finish type, substrate texture, application methods, and specified dry film thickness Please **contact** your Sales Representative for **specific** project recommendations
Shelf Life	**Maximum Shelf Life** of 2 years when stored in unopened containers. Subject to re-inspection.
Storage Temperature	Store indoors at 40F – 90F. Keep from Freezing!

APPLICATION PARAMETERS

Relative Humidity Restrictions	**Do not exceed** 85% during application or curing phase Substrate temperatures to be 5F above dew point
Minimum Application Temperature	50F (substrate)
Maximum Application Temperature	90F (substrate)
Service Temperature (Continuous):	180F (substrate)
Service Temperature: (Intermittent):	220F (substrate)
Application & Curing Information Dry to **touch**: Dry to **recoat**: Dry **hard**:	***At 77F and 50% Relative Humidity:*** 30 mins 2 hours 6 hours; 7-14 days for Full Cure ***Note: Higher film thickness & humidity or lower temperature will slow dry/cure times***
Technical Notes	• This coating is **Not Formulated** for Immersion Service or a Continuous High Moisture Environment • **Do not** apply when the relative humidity is above 85% or when a surface will be subjected to temperature below 50F. • Ensure enclosed areas are adequately **ventilated** during curing phase to prevent excessive humidity build up which can affect sag resistance or cure • Superior performance will result from **priming** with a rust inhibitive primer on ferrous metal surfaces • This coating is **Not Recommended For Floors**

COATING RECOMMENDATION:

For best performance, **2** coats are recommended over properly prepared & primed surfaces

MIXING:

- Mix thoroughly and slowly to a uniform consistency ensuring not to introduce air into the product
- For multiple containers, mix paint together for color consistency
- Approve color prior to application – color chip approximates the color

THINNING/REDUCERS:

- Ideally do not thin
- Can be thinned with up to 5% clean/potable tap water
- In hot environments it may be necessary to add 913 Latex Reducer to the paint to improve workability – up to 4 fluid ounces per gallon only
- Use least amount of additive to provide desired workability

Note: Excessive reduction with water can cause flash rusting on steel and reduce sag resistance during application

APPLICATOR INFORMATION:

BRUSH:

Use a nylon/polyester brush

NOTE: Due to the Fast Dry nature of this product, brushing should be limited small areas while maintaining a wet edge

ROLLER COVER:

Use a 1/4" – 3/8" nap synthetic cover depending on the degree of texture of the surface to be painted

AIRLESS SPRAY:

Pressure 2,000 psi; Tip: .013 - .017

HVLP SPRAY:

Cap Pressure 10 psi; 1.2-1.6 Nozzle

EQUIPMENT CLEANING:

- Immediately wipe up any drips or spatters with a damp cloth
- Clean application tools immediately after use with warm soapy water and rinse thoroughly
  - If pausing for a break, wrap wet applicator in plastic wrap or seal in a poly bag
  - Prevent rusting of spray equipment – flush with a compliant cleanup solvent after cleaning

NOTE: Follow the manufacturer's safety recommendations when using solvents

SUBSTRATES AND SURFACE PREPARATION

SURFACE PREPARATION IS IMPORTANT - All surfaces must be of uniform porosity, clean, dry and free of mildew, grease, chalk, soap film, sanding dust or other contaminants that could interfere with adhesion of the coating

- Remove all loose or peeling material from previously painted surfaces
- Wash with an appropriate cleaner/mild detergent and water solution, rinse thoroughly and allow to dry
- Ensure all substrates to be coated are free of Mildew, Mold, Algae or other biological contaminates
  - Wash with a cleaner such as JOMAX or bleach/water (1:3) solution - Apply the solution, scrub the mildewed area, allow solution to remain on the surface for 10 minutes, rinse thoroughly and allow to dry
- Repair all cracks, holes and other voids with an elastomeric patch or elastomeric sealant.
- On glossy or smooth surfaces, scuff sand using appropriate sandpaper to provide a uniformly dulled appearance
- Remove all sanding dust, scraped, sand-peeled and checked paint prior to painting
- Do not apply at ambient or substrate temperatures below 50F

FERROUS METAL:

- Clean metal of any contaminants by pressure washing or solvent wiping in accordance with SSPC-SP-1. At a minimum, power tool clean the metal per SSPC-SP-3 being careful not to polish the metal.
  - Wire Wheeling should be avoided to prevent polishing the metal
- Properly prepared metal surface should have appropriate sharp & angular profile for the paint to mechanically bond.
- For improved coating performance, any and all corrosion must be removed with sandpaper, wire brush or other abrasion method.
- Prime all properly prepared ferrous metal with suitable primer after proper surface preparation to prevent flash rusting and improve adhesion performance.

NON-FERROUS METAL & FIBERGLASS:

- Clean the metal/fiberglass surface of any contaminants such as oil, grease, mold release or dirt.
- At a minimum, scuff sand the metal or fiberglass surface with appropriate sandpaper to provide a uniformly dulled surface with adequate surface profile and remove sanding dust prior to painting.
- Apply a bonding primer suitable for the metal being painted if mechanical surface preparation is not possible.

SURFACE PREP FOR UNPAINTED MASONRY:

- Remove all surface contamination, form release agents, moisture curing membranes, mildew, efflorescence, etc. by washing with an appropriate cleaner. Then rinse and allow to dry.
- Do not apply to damp or wet surfaces.
- Concrete or mortar needs to be cured approximately 30 days at 70F.
- Prime all properly prepared masonry surfaces with suitable primer. For porous CMU substrates use appropriate block filler and back roll to fill voids.
  - Do not apply block filler to smooth surfaces as peeling may occur.

NEW OR BARE WOOD:

- Remove mill glaze and expose fresh wood cells prior to applying appropriate wood sealer or primer. Use chemical solution or sand with appropriate sandpaper.
- Remove sanding dust prior to application of sealer or primer.
- Seal with correct primer for wood substrates.

PRE-PAINTED SURFACES:

- Wash with a mild detergent and water solution. Rinse thoroughly, allow to dry thoroughly.
- All glossy or hard smooth surfaces should be scuff sanded using appropriate sandpaper to provide a uniformly dull appearance on all substrates.
- Remove all sanding dust prior to painting.

WARNING! If you scrape, sand or remove old paint from any surface you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN.

PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.

Wear a NIOSH approved respirator to control lead exposure. Carefully clean up with a wet mop or HEPA vacuum. For additional information on surfaces that may contain lead paint, contact the U.S. EPA / Lead Information Hotline at 1.800.424.LEAD (5323).

PRIMER RECOMMENDATION:

Steel (ferrous metal):
Apply direct or for **Maximum Durability**, prime with 4087 Series Metal Master Universal Primer

Galvanized Metal:
Apply direct or use 4087 Series Metal Master Universal Primer for added barrier protection

Aluminum (non-ferrous metal):
Cloverdale ClovaPrep 83020 Epoxy or 83060 Vinyl Wash Primer

Fiberglass:

First Coat Bonding Primer or other Approved Suitable Bonding Primers

Masonry (other than porous block):
First Coat Bonding Primer or pHLEX-TITE Elastomeric Primer

Porous Masonry Block:
Fill voids with 501901 Sprayable Block Filler

Interior Dry New Wood:
Unique II Undercoater or First Coat Bonding Primer

Interior Dry Wall:
403601 Master Painter ZERO Roseal Primer

SAFETY PRECAUTION

Safety Precautions: For detailed information please refer to this product's safety data sheet (SDS) – A copy of which can be found on our website, www.roddapaint.com under Products/Product Data Sheets and SDS

First Aid: In case of eye contact, flush immediately with plenty of water for at least 15 minutes. Wash contaminated skin with soap and water. If ingested, call physician or the Poison Control Center immediately.

UPDATES/AMENDMENTS

Please visit www.roddapaint.com for the most recent versions of Technical Data Sheets and Safety Data Sheets

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