



645 Series

Rapid Dry Acrylic Modified DTM Enamel

Technical Data Sheet

Revised 2/25/2026

645 Series Acrylic modified DTM enamel is recommended for industrial use on primed or un-primed metal surfaces that require cost-effective, premium industrial applications. Acrylic Modification provides an upgrade in performance over standard alkyd with improved gloss retention during the service life. With excellent DOI and rapid dry properties, it is suitable for applications on metal fabrication, heavy duty equipment, agricultural equipment and industrial equipment.

This product contains HAPs and has less than 4.5 lbs/gal VOCs per EPA Method 24. It has excellent substrate wetting properties. Engineered to provide application flexibility and can be used as a single component or can be catalyzed with ACT913 to increase long term properties.

Product Advantages

- Ready to Spray
- <4.5 lbs/gal VOC
- Rapid Drying
- Direct to metal capable
- Good outdoor durability and gloss retention
- Available in a wide range of colors

Product Uses

- Agriculture Equipment
- Structural Steel
- Dumpsters and Storage Containers
- Industrial Machinery and Equipment
- General OEM Finish

Physical Properties	645 Series	645 Series with Activator 913 (optional)
Solids % by weight	45 – 51% (Dependent Colors and Shades)	48 – 52% (Dependent Colors and Shades)
Solids % by volume	40 – 42%	42 – 44%
HAPs	3.5 lbs/gal (420 g/L)	3.4 lbs/gal (407 g/L) (Activator does not have HAPs)
Photo-chemically reactive	Yes	Yes
Weight/Gallon	8.08 – 8.82 lbs/gal (968 – 1056 g/L)	8.08 – 8.82 lbs/gal (968 – 1056 g/L)
VOC (EPA Method 24)	<4.5 lbs/gal (<539 g/L)	<4.5 lbs/gal (<539 g/L)

*All material property values are theoretical. Actual values will slightly vary depending on manufacturing variables.

Application

Surface Preparation

The surface to be coated must be sanded and free of all contamination (including dust, dirt, oil, grease, and oxidation). Chemical treatment and the use of a conversion coating will improve the performance properties of the coating system. We recommend that adhesion and system compatibility be checked prior to full application.

645 Series

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Substrate	Application Recommendations: Direct to Properly Prepared Substrate
Cold Rolled Steel	Very good
Hot Rolled Steel	Very good
Galvaneal	Not recommended over zinc substrates
Galvanized	Not recommended over zinc substrates
Aluminum	Fair – Good (chrome treated aluminum only)
Plastic/Fiberglass	Not Recommended over plastic substrates

Mixing Directions	645 Series	645 Series with Activator 913
Mix Ratio	N/A	15 : 1
Pot Life	N/A	8 hours
Mix Directions	Stir thoroughly before and occasionally during use	
Thinning	Use Xylene if HAPs is not a concern, use MAK if HAPs are a concern.	
Line Flush Clean Up	MEK / Acetone	

Application Equipment	Application	Application Viscosity
Conventional Cup Gun	1.4 – 1.8 mm needle/nozzle w/40–50 psi at the gun	15 – 20" #3 EZ Zahn
Conventional with Pressure Pot	1.4 – 1.8 mm needle/nozzle w/40–50 psi at the gun 20 – 25 fluid pressure	15 – 20" #3 EZ Zahn
HVLP (with or without pressure pot)	1.4 – 1.8 mm needle/nozzle w/10 psi at the cap	15 – 20" #3 EZ Zahn
Airless	0.011" – 0.014" tip at 1500 – 2200 psi fluid pressure	15 – 20" #3 EZ Zahn
Air-Assisted Airless	0.011" – 0.014" tip at 1200 – 1500 psi fluid pressure	15 – 20" #3 EZ Zahn
Brush or Roll	Polyester, nylon brush, or short nap roller	
Electrostatic	Add 10% SOL855 to help with pattern, atomization, and wrap.	

Application	645 Series
Apply	1-2 Coats with 10-minute flash
Recommended Wet Film Build	3.5-4.5 mils (87-112 microns)
Recommended Dry Film Build	1.5 – 2.0 mils (40-50 microns)
Coverage (at 1 mil no loss)	625 – 675 sq. ft./gal
Compatible Primers	Bariline 750 and Bariline 755

645 Series

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Dry Times	645 Series	645 Series with Activator 913
Air Dry @ 77°F (25°C) 50% RH		
To Touch	15 – 30 minutes	90 – 120 minutes
To Handle	60 minutes	150 – 180 minutes
To Recoat ²	Before 6 hours or after 30 hours – 4 days	3 hours – 4 days
Force Dry	10 minutes air dry, bake 30 minutes @ 160°F (71°C)	

*Paint film is not fully cured for 7 days. Drying time may vary, depending on film build, color selection, temperature, humidity, and degree of air movement

2. If recoated between 6 hours and 30 hours, lifting of previous finish will occur. Before 6 hours coating is adequately solubilized to prevent lifting. After 30 hours, the coating has cured enough where solvent resistance is achieved.

Technical Data

Performance Properties	ASTM Method	645 Series	645 series with Activator 913
Pencil Hardness	D3363	HB – H	F – H
Gravelometer	D3170	5 – 6	5
Gloss @ 60°	D523	85+	85+
DOI	D5767	90	90
Adhesion	D3359	4B – 5B	4B
In Service Temperature Limit – Intermittent		180°F (82°C)	180°F (82°C)
In Service Temperature Limit – Continuous		Not recommended	Not recommended

* Properties listed are after allowing paint to cure for 14 days at ambient temperatures

Chemical Resistance	ASTM Method	645 Series	645 series with Activator 913
MEK (25 double rubs)	D1308	Severe wrinkle	Slight stain
10% NaOH (Sodium Hydroxide) – 24 hours	D1308	Severe wrinkle	Slight stain (no wrinkle)
10% HCl (Hydrochloric acid) – 24 hours	D1308	Slight wrinkle	Pass
10% H ₂ SO ₄ – Soak 24 hours	D1308	Slight stain	Pass
Gasoline – Soak 24 hours	D1308	Slight wrinkle	Slight stain
Water – Soak 24 hours	D1308	Pass	Pass

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Weather Resistance	ASTM Method	645 Series	645 series with Activator 913
Salt Spray 100 hours	B117		
Corrosion Creep	D1654	None	None
Scribe Blisters	D714	None	8D
Face Blisters	D714	None	None
Humidity 100 hours	D2247		
5 Minute Adhesion Recovery	D3359	3B – 4B	4B
1 Hour Adhesion Recovery	D3359	3B	4B
24 Hour Adhesion Recovery	D3359	4B	5B
QUV-B: 60° angle	D4587		
168-hour gloss retention	D523	90%	90%

* Properties listed are after allowing paint to cure for 14 days at ambient temperatures

Safety / Warranty

Precautionary Information

Before using the products listed herein, carefully read each product label and follow directions for use. Please read and observe all warnings and precautionary information on all product labels. Prevent all contact with skin and eyes and breathing of vapors and spray mist. Repeated inhalation of high vapor concentrations may cause a series of progressive effects including irritation of the respiratory system, permanent brain and nervous system damage and possible unconsciousness and death in poorly ventilated areas. Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Emergency medical or spill information 8am – 5pm: 260.665.8431. After hours: Chemtrec 800.424.9300

KEEP OUT OF THE REACH OF CHILDREN.

Safety

These materials are designed for application only by professional, trained personnel, using proper equipment under controlled conditions and are not intended for sale to the general public.

Safe application of paints and coatings requires knowledge of equipment, materials, and individual training. Directions and precautionary information on both equipment and products should be carefully read and strictly observed for personal safety and property protection. Consideration must be given to eliminate conditions, which may generate hazardous atmospheres during spray application or subject operations or bystanders to injury or illness.

Special precautions must be taken when utilizing spray equipment, particularly airless equipment. High-pressure injection of coatings into the skin by airless equipment may cause serious injury requiring immediate medical attention at a hospital. Treatment advice may also be obtained from Poison Centers.

Warranty / Disclaimer

The technical data and other printed information furnished are true and accurate to the best of our knowledge. The products are warranted pursuant to acceptance of limited warranty. A copy of which can be obtained from Baril Coatings, which is the exclusive warranty with respect to the sale of this product. The modification of any component or uses not outlined in this bulletin nullifies the warranty unless advance written confirmation is obtained from Baril Coatings. No other warranties expressed or implied shall apply. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, shall be to supply replacement materials as set forth in the limited warranty.