



# Mascoat

INDUSTRIAL-DTI



## Selection & Specification Data

<b>Product Name</b>	Mascoat Industrial-DTI
<b>Product No.</b>	MI-DTI
<b>Description</b>	Mascoat Industrial-DTI is a composite ceramic & silica-based insulating coating that provides an insulating barrier, protects personnel and blocks corrosion all in one application. The coating is specifically designed to be a multiple purpose coating solving painting and insulating issues.
<b>Features</b>	<ul style="list-style-type: none"> <li>◆ Excellent thermal insulation at low thickness</li> <li>◆ Excellent personnel protection</li> <li>◆ Prevents Corrosion Under Insulation (CUI)</li> <li>◆ Provides anti-condensation protection</li> <li>◆ Provides inspection ability w/o removal</li> <li>◆ Fast cure times</li> <li>◆ Low VOC Product</li> <li>◆ Highest volume solids insulation coating on the market</li> <li>◆ Easy application to irregular surfaces</li> </ul>
<b>Base</b>	Water-based Acrylic Insulation Coating
<b>Gloss</b>	Flat
<b>Color</b>	White, tan, grey, black. Custom tinting on request.
<b>Priming</b>	Self priming over non-ferrous materials (stainless steel & aluminum). Primer required for carbon steel substrates.
<b>Topcoats</b>	Please consult Mascoat.
<b>Wet Weight</b>	5.2–5.3 lbs/gallon (0.63 kg/liter)
<b>Weight dry film to area</b>	0.035 lbs/ft <sup>2</sup> at 20 mils dft (0.170 kg/m <sup>2</sup> at 0.50 mm dft)
<b>Practical Volume Solids Content</b>	78–80%
<b>Average Coat Thickness</b>	20–22 mils WFT at 70°–130°F (0.5 mm WFT at 21°–54°C)
<b>Practical Dry Coat Coverage</b>	50–55 ft <sup>2</sup> /gal @ 20 mils (1.3 m <sup>2</sup> /liter @ 0.5 mm)
<b>VOC Content</b>	0.06 lbs/gal (7.6 grams/liter)
<b>Limitations</b>	Applications should not exceed 400°F (200°C).
<b>Storage</b>	Do not subject wet coating in pail form to freezing conditions. Coating should be kept in a warehouse between 60°F and 90°F.

## Substrates & Surface Protection

<b>Surface Prep</b>	Surface should be dry and free of foreign matter. Surface prep can be used to NACE 1-3 (SSPC SP 5-6) when applicable.
<b>Ferrous Surfaces</b>	Should be primed prior to application of MI-DTI Insulating Coating. Since the coating is water-based, it is important to have a boundary layer of protection to prevent flash rusting.
<b>Non-ferrous Surfaces</b>	The coating can be applied directly to non-ferrous surfaces. Surface should be clean and free of any oil, dirt or other foreign matter.

## Application Equipment

Listed below are the general equipment guidelines for the application of this product.

<b>Airless Sprayer</b>	Pump Ratio:	33:1 or larger
	Volume:	1.5 gpm (5.7 lpm) or greater
	Hose:	3/8" or larger with no more than 3' of 1/4" whip. 1/2" hose recommended for length above 50'.
	Tip Size:	0.017" (for tight spots) 0.019–0.023" (Normal use)
	Pressure:	Minimum of 3000 PSI
<b>Small Spray Application</b>	Please consult Mascoat for the Small Application Gun. This gun is excellent for small applications and touch-ups.	
<b>Brush</b>	Brushing is only recommended for touch-up of less than 0.5 ft <sup>2</sup> (0.04 m <sup>2</sup> ). Brushing can inhibit coating performance. Please consult Mascoat for detailed brushing instructions.	
<b>Rolling</b>	Not recommended for this coating	

## Application Conditions

<b>Surface Temperatures</b>	Surface temperatures for applications should be greater than 60°F (15°C) or above. Lower surface temperatures will increase dry times.
<b>Applications</b>	<p><i>Ambient &amp; Cold (60°–139°F, 15°–59°C):</i> For temperatures (surface or ambient – whichever is lower), an initial tack coat is recommended of 10 mils (0.25 mm or 250 microns). This tack coat will help eliminate sag on vertical wall applications. Tack coat should be dry to touch prior to next pass. Typical coat thickness should not exceed 20–22 mils (0.5–0.55mm) wet. Coating can be reapplied after each coat is thoroughly dry.</p> <p><i>Hot (&gt;140°F, &gt;60°C):</i> Please consult Mascoat.</p>
<b>Application Thickness</b>	Product can be applied in successive coats to increase insulation ability. There are no upper limitations.
<b>Dryfall</b>	Dryfall within a 3 ft radius

## Other Coating Specifications

Item	English Value (Metric Value)	Test Method
Cyclic Salt Fog	Excellent 2000 hrs	ASTM B-117
UV-A Exposure	Excellent 2000 hrs	ASTM D-5894
Humidity Cabinet	Excellent 2000 hrs	ASTM D-4585
QUV	Excellent 2000 hrs	ASTM G-154
Permeability	Low — 4.98 perms (3.28 grams/24 hrs/m <sup>2</sup> /mm/hg)	ASTM 1653-03
Transmission	Low — 4.14 grains/hr/ft <sup>2</sup>	ASTM 1653-03
Cross Hatch Adhesion	100% 5 B	ASTM D-3359
Pull Apart Strength	260–360 psi	ASTM D-4541
Elongation Rate	Above 30%	ASTM D-638
Thermal Conductivity	0.4381 Btu-in/ft <sup>2</sup> -hr-°F (0.0698 W/m/K)	Thermal Probe Study
Thermal Emittance	0.85	ASTM C-1371
Solar Reflectivity	0.82–0.86	ASTM C-1549
Transmittance	0.00	Calculated
Emissivity/Absorptance	0.14–0.18	Calculated
Flame Spread	Class A	ASTM E-84/87
Smoke Developed	Class A	ASTM E-84/87
Cone Calorimeter	>6	ASTM E-1384-97

## Mixing & Thinning

<b>Mixing</b>	Only a mud mixing paddle should be used. Use 1/2" drill motor to stir contents with paddle. <i>Make sure drill is set to reverse to ensure that the paddle will not mar the bucket's inner wall.</i> Please consult Mascoat for paddle, if needed.
<b>Thinning</b>	Thinning is normally not needed. Please consult Mascoat for specific instructions if thinning is desired.
<b>Pot life</b>	Coating is one part, so no catalyzation is needed. Pail can be reused if properly sealed.
<b>Container</b>	5 gallon pail (18.92 liters)

## Package, Handling & Storage

<b>Container Wet (with pail/lid)</b>	27.5–28.0 lbs per 5 gallon pail (12.47–12.7 kg per 18.92 liters)
<b>Net Contents</b>	25.9 lbs per 5 gallon pail (11.7 kg per 18.92 liters)
<b>Flash Point (Setaflash)</b>	None
<b>Storage</b>	Do not subject wet coating in pail form to freezing conditions. Coating should be kept in a warehouse between 60°F and 90°F.
<b>Shelf Life</b>	One year shelf life from manufacture date.
<b>Caution</b>	Do not let product freeze.

## Cleanup & Safety

<b>Cleanup</b>	Equipment may be cleaned with soap & water
<b>Safety</b>	Half-face respirator recommended with ammonia cartridge or better. Eye protection recommended.
<b>Ventilation</b>	Recommended for constricted areas.
<b>Caution</b>	This material is not for human consumption
<b>Clothing</b>	Safety clothing & gloves are recommended

## Dry Times vs. Humidity

Surface Temperature	% Humidity	Time Between Coats (hours)
51–60°F (10–15°C)	10–30%	6.00
	31–50%	8.00
	51–70%	10.00
	>70%	12.50
61–70°F (16–21°C)	10–30%	4.00
	31–50%	5.50
	51–70%	6.50
	>70%	8.00
71–80°F (22–26°C)	10–30%	2.00
	31–50%	3.00
	51–70%	3.50
	>70%	4.00
81–90°F (27–32°C)	10–30%	1.50
	31–50%	2.00
	51–70%	2.50
	>70%	3.00
91–100°F (33–37°C)	10–30%	1.25
	31–50%	1.50
	51–70%	1.75
	>70%	2.00
101–110°F (38–43°C)	10–30%	1.00
	31–50%	1.25
	51–70%	1.50
	>70%	1.75
111–120°F (44–49°C)	10–30%	0.75
	31–50%	1.00
	51–70%	1.25
	>70%	1.50
121–130°F (50–54°C)	10–30%	0.50
	31–50%	0.75
	51–70%	0.75
	>70%	1.00

Use 90° thumb test or moisture meter prior to recoat. This is the estimated dry time for 15–20 mils (0.38–0.50 mm) of Mascoat Industrial-DTI wet. Dry time may vary depending on other conditions such as wind or enclosed environments. Lighter thickness passes will expedite dry times. Forced ventilation in confined areas will also expedite dry times.

## Cure Times

Temperature	Cure Time
50–60°F (10–15°C)	60–72 hrs
61–70°F (16–21°C)	48–60 hrs
71–80°F (22–26°C)	36–48 hrs
81–90°F (27–32°C)	20–24 hrs
91–100°F (33–37°C)	18–20 hrs
>100°F (>37°C)	14–16 hrs

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