Mascoat®
INDUSTRIAL-DTI

Selection & Specification Data

Product Name	Mascoat Industrial-DTI
Product No.	MI-DTI
Description	Mascoat Industrial-DTI is a coating comprised of proprietary air-encapsulated particulates that provides a thermal insulation 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.
Features	♦ Excellent thermal insulation at low thickness ♦ Excellent personnel protection ♦ Prevents Corrosion Under Insulation (CUI) ♦ Provides anti-condensation protection ♦ Provides inspection ability w/o removal ♦ Fast cure times ♦ Low VOC Product ♦ Easy application to irregular surfaces
Base	Water-based Acrylic Insulation Coating
Gloss	Flat
Priming	Self priming over non-ferrous materials (stainless steel & aluminum). Primer required for carbon steel substrates.
Topcoats	Please consult Mascoat.
Wet Weight	5.2—5.3 lbs/gallon (0.63 kg/liter)
Weight Dry Film To Area	0.035 lbs/ft^2 at 20 mils DFT (0.170 kg/m^2 at 0.50 mm DFT)
Practical Volume Solids Content	78—80%
Average Thickness per Coat	20—22 mils WFT at 70˚—130˚F (0.5 mm WFT at 21˚—54˚C)
Practical Dry Coat Coverage	55—60 ft^2/gallon @ 20 mils (1.45 m^2/liter @ 0.5 mm)
VOC Content	0.06 lbs/gallon (7.6 grams/liter)
Limitations	Peak operational temperature should not exceed 375˚F (190˚C). Maximum sustained temperature should not exceed 350˚F (177˚C). Cured coating should not be exposed to temperatures below -60˚F (-51˚C).
Storage	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

Surface Prep	Surface should be dry and free of foreign matter. Surface prep can be used to NACE 1-3 (SSPC SP 5-6) when applicable.
Ferrous Surfaces	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.
Non-ferrous Surfaces	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.

Airless Sprayer	Pump Ratio:	33:1 or larger
	Output per Cycle:	180cc (Minimum) 290cc (Optimum)
	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
Small Spray Application	Please consult Mascoat for the Small Application Sprayer. This sprayer is excellent for small applications and touch-ups.	
Brush or Roll	Not recommended for this coating	

Application Conditions

Surface Temperatures	Surface temperatures for applications should be greater than 60˚F (15˚C). Lower surface temperatures will increase dry times.
Applications	*Ambient & Cold (60˚—139˚F, 15˚—59˚C):* 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. *Hot (>140˚F or >60˚C):* Please consult Mascoat.
Application Thickness	Product can be applied in successive coats to increase insulation ability. There are no upper limitations.
Dryfall	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^2/mm/hg)	ASTM 1653-03
Transmission	Low – 4.14 grains/hr/ft^2	ASTM 1653-03
Cross Hatch Adhesion	5A	ASTM D-3359
Pull Apart Strength	130-260 psi*	ASTM D-4541
Elongation Rate	Above 30%	ASTM D-638
Thermal Conductivity	0.4381 Btu-in/ft^2-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
Absorptance	0.14–0.18	Calculated
Flame Spread	Class A	ASTM E-84
Smoke Developed	Class A	ASTM E-84
Cone Calorimiter	>6	ASTM E-1354-97

*Pull apart strength (due to cohesive failure) is dependent on application thickness, curing time, and in-service temperatures.

Mixing & Thinning

Mixing Only a mud mixing paddle should be used. Use 1/2" drill motor to stir contents with paddle. *Make sure drill is set to reverse to ensure that the paddle will not mar the bucket's inner wall.* Please consult Mascoat for paddle, if needed. DO NOT MECHANICALLY SHAKE.

Thinning DO NOT THIN unless authorized in writing by Mascoat.

Pot life Coating is one part, so no catalyzation is needed. Pail can be reused if properly sealed.

Container 5 gallon pail (18.92 liters)

Package, Handling & Storage

Container Wet (with pail/lid) 27.5–28.0 lbs/5 gallon pail (12.47–12.7 kg/18.92 liters)

Net Contents 25.9 lbs/5 gallon pail (11.7 kg/18.92 liters)

Flash Point (Setaflash) None

Storage Do not subject wet coating in pail form to freezing conditions. Coating should be kept in a warehouse between 60˚F and 90˚F.

Shelf Life 18 months shelf life from manufacture date.

Caution Do not let product freeze.

Cleanup & Safety

Cleanup Equipment may be cleaned with soap & water.

Safety For minimum protection, Mascoat recommends an N95 particulate respirator mask. For additional protection, a half mask respirator with organic vapor cartridge can be utilized. Eye protection recommended due to spray application method.

Ventilation Recommended for constricted areas.

Caution This material is not for human consumption.

Clothing Safety clothing & gloves are recommended.

Dry Times vs. Humidity

Surface Temperature	% Humidity	Time Between Coats (hours)
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. Moisture readings should be less than 12% prior to recoat and 0% prior to topcoating. 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