



Mascoat
INDUSTRIAL-HR



Selection & Specification Data

Product Name	Mascoat Industrial-HR
Product No.	MI-HR
Description	Mascoat Industrial-HR is a composite ceramic & silica-based insulating coating with highly reflective particles that provides an insulating barrier, protects personnel, reduces solar loading, and prevents corrosion all in one application. The coating is specifically designed to be a multiple purpose coating solving painting and insulating issues.
Features	<ul style="list-style-type: none"> ◆ High reflectance characteristics ◆ Excellent thermal insulation at low thickness ◆ Excellent personnel protection ◆ Prevents Corrosion Under Insulation (CUI) ◆ Provides inspection ability w/o removal ◆ Fast cure times ◆ Low VOC product ◆ Highest volume solids insulation coating on the market ◆ 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 for specific details
Wet Weight	5.74 lbs/gallon (0.69 kg/liter)
Weight dry film to area	0.058 lbs/ft ² at 20 mils dft (0.28 kg/m ² at 0.50 mm dft)
Volume Solids Content	78–80%
Average Coat Thickness	20–22 mils WFT at 70°–130°F (0.5 mm WFT at 21°–54°C)
Practical Dry Coat Coverage	50–55 ft ² /gal @ 20 mils (1.4 m ² /liter @ 0.5 mm)
VOC Content	0.06 lbs/gal (7.6 grams/liter)
Limitations	Applications should not exceed 380°F (194°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 (16°C and 32°C).

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-HR 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
	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 3,000 PSI
Small Spray Application	Please consult Mascoat for the Small Application Sprayer. It is excellent for small applications and touch-ups.	
Brush	Brushing is only recommended for touch-up of less than 0.5 ft ² (0.04 m ²). Brushing can inhibit coating performance. Please consult Mascoat for detailed brushing instructions.	
Rolling	Not recommended for this coating.	

Application Conditions

Surface Temperatures	Surface temperatures for applications should be greater than 60°F (15°C) or above. Lower surface temperatures will increase dry times.
Applications	<p><i>Ambient & 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 (>140°F, >60°C):</i> Please consult Mascoat</p>
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	100% 5 B	ASTM D-3359
Pull Apart Strength	260–300 psi	ASTM D-4541
Elongation Rate	Above 30%	ASTM D-638
Thermal Conductivity	0.670 Btu-in/ft ² -hr-°F (0.097 W/m/K)	ASTM C-177
	0.091 Btu-Btu-in/ft ² -hr-°F (0.0131 W/m/K)	RvE Testing
Emissivity	0.14	C-1371
Solar Reflectivity	0.86	C-1549
Flame Spread	10	ASTM E-84
Smoke Developed	20	ASTM E-84
Fire Rating	Class A	ASTM E-84

Mixing & Thinning

Mixing	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. 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)	31–33 lbs per 5 gallon pail (14–15 kg per 18.92 liters)
Net Contents	28–29 lbs per 5 gallon pail (12.5–12.8 kg per 18.92 liters)
Flash Point (Setaflash)	None
Storage	Product should be kept in a storage area above 50°F (10°C). Product can be reused if sealed correctly. Keep the container out of direct sunlight for sustained periods of time.
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	Half-face respirator recommended with ammonia cartridge or better. Eye protection recommended.
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)
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-HR 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

The data within is true to the best of our knowledge on the date of publication and is subject to change without prior notice. We guarantee our products to conform to Mascoat quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. All logos property of their respective owners.

