# Mascoat® INDUSTRIAL-HR



## HIGHLY REFLECTIVE COATING

A SPRAY-APPLIED INSULATING AND REFLECTIVE COATING FOR ALL PURPOSES









Mascoat Industrial-HR is a thermal insulating coating with highly reflective particles that is formulated to provide radiant heat gain protection for tanks, vessels, and other facility surfaces that are affected by solar loading. The coating can effectively protect internal contents from rising above desired temperatures. By using the coating, customers can efficiently stabilize processes, protect personnel, and consistently maintain product levels.

The coating's high-tech formulation is one-part and water-based, providing an environmentally- and user-friendly product. It is applied via spray method, improving equipment aesthetics while protecting substrates, safeguarding contents and preventing corrosion.

Mascoat Industrial-HR shares many of its insulating qualities with the widely used and well-accepted Mascoat Industrial-DTI, but with added highly reflective particles that help the coating to retard UV and sunlight, lessening the chance for unnecessary solar loading. The coating has been tested to ASTM standards and exceeds most criteria for weatherability, adhesion, flexibility and UV resistance. It is perfect for any facility which has a problem with radiant heat gain raising internal temperatures.

Contact Mascoat today to inquire about application forecasting and product pricing—or to ask about products that suit your specific project.

## **USES**

- Gasoline Tanks
- HVAC
- Water linesStorage Tanks
- Chilled Water Tanks And much more...
- Industrial Buildings
- Piping

### **BENEFITS**

- Provides excellent solar reflection
- Adheres to most substrates
- Prevent CUI (Corrosion Under Insulation)
- · Provides substrate protection
- · Increases efficiency and saves energy
- Rapid application procedure reduces man-hours necessary for installation compared to conventional insulation
- · Extremely lightweight
- · Class A Fire Rating
- Environmentally friendly









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This product is accepted for LEED Certification Points



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How does the coating work? Mascoat Industrial-HR employs air-encapsulating particles in a variety of shapes that do not

allow for a straight line through the coating in which heat could pass efficiently. This high content of entrapped and stagnant air in a thin coating greatly reduces thermal transfer. Reducing the heat transfer will result in higher temperature exposed to convective loss due to air flow over the uncoated side of the substrate. This will result in less radiated heat transferring through the coated substrate. In addition, the coating's bright white color reflects a great deal of the sun's UV rays, reducing the amount of heat gained from the sun. The combination of these factors allows for excellent thermal dissipation across the surface of the coating.



Each highly reflective particle entraps stagnant air in a

component

matrix structure.



Conducted heat is transferred across entire surface and throughout the beads.

HEAT Reflected



HEAT Reflected

### APPLICATION INSTRUCTIONS

Surface Preparation: The minimum requirements for carbon steel substrates is a solvent wipe in accordance with SSPC SP1 followed by power tool cleaning in accordance with SSPC SP3. Abrasive blasting in accordance with SSPC SP6 is preferred for longer service life. Surface must be free of all contaminants, both visible and non-visible, prior to application of the coating.

**Primers:** Primers are recommended for carbon steel substrates. Please consult Mascoat prior to application for the appropriate type of primer for a given environment. Mascoat Industrial-HR is self-priming over non-ferrous materials such as stainless steel and aluminum.

Application: An airless sprayer is the best method for application of the coating. The sprayer should have a capacity of at least 1.5 gallon per minute at 3,000 PSI. Remove all strainers and filters from the sprayer before application. Failure to do so will result in the filtering of insulation particles. Please consult Mascoat for detailed instruction sheet, including list of sprayers, prior to application. A Small Application (SA) Kit can also be used for small applications under 100 square feet or touch ups. This speciallymade kit can be obtained by contacting Mascoat.

**Brushing and Rolling:** Except for small touch-ups, it is not recommended to brush or roll on Mascoat Industrial-HR, as the insulating particles can be damaged and coating performance inhibited.

**Thinning:** Do not thin unless authorized in writing by Mascoat.

**Mixing:** Only mud mixing paddles, available from Mascoat, should be used to mix the contents of the pail. Use a 1/2" drill motor to stir. Make sure that drill is set to the reverse setting to ensure that the paddle will not mar the pail's inner wall and contaminate the coating.

**Cleaning:** All equipment can be cleaned with soap and water.

All data on this sheet was collected using ASTM procedures when applicable. Findings may be different due to application techniques and environmental conditions. Thermal conductivity is based on equivalency testing.

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### **TECHNICAL DATA**

All data is to ASTM standards when applicable

CONTAINER SIZE: 5 Gallons (18.92 Liters)

COMPONENTS: One-part (inclusive)
COAT THICKNESS: 20 mils (0.5 mm) dry

COVERAGE PER GALLON: 50–55 ft² at 20 mills

(COVERAGE PER LITER): (1.4 m² at 0.5 mm)

WEIGHT: 5.74 lbs per gallon (0.69 kg/liter)

**VOLUME SOLIDS: 78-80%** 

SHEEN: Flat

BASE: High-grade acrylic water-

based

CHLORIDES: Low to none

VOC CONTENT: 0.06 lbs/gallon

(7.6 grams/liter)

**ELONGATION: Above 30%** 

PERMEABILITY: 4.98 Perms

ACCELERATED AGING: Excellent (6,000+ hours)

ABRASION RESISTANCE: Moderate to high

THERMAL CONDUCTIVITY: 0.0698 W/m/K

 $(0.4381~BTU\text{-in/ft}^2\text{-hr-}^\circ F)$ 

THERMAL EMITTANCE: 0.85

SOLAR REFLECTIVITY: 0.86

TRANSMITTANCE: 0.0

EMISSIVITY: 0.85

ABSORBTANCE: 0.14

UV REFLECTION: 99.9%

FLAME SPREAD: Class A

SMOKE DEVELOPED: Class A

FIRE RATING: Class A

APPLICATION TEMPS: 60-250°F

(15-121°C)

PEAK OPERATION

TEMPERATURE: 375°F maximum

(190°C maximum)

SUSTAINED OPERATION

TEMPERATURE: 350°F maximum

(177°C maximum)

TOPCOATING: Please contact Mascoat.

**APPLICATION METHOD: Airless sprayer**