



BlackStone HE

High Emissivity Coating

DESCRIPTION

BlackStone HE is an inorganic water based coating technology incorporating an advanced proprietary blend additives to offer increased emissivity and high temperature performance. The coating is designed to achieve maximum heat transfer efficiency and reduce the diffusion mechanism of high temperature substrate oxidation. This single component technology is 50% solids by weight containing zero VOCs.

SUGGESTED USES :

Reformer heaters	Ladles	Exhaust systems	Radiant heaters
Cracking furnaces	Kettle bottoms	Solar absorbers	Stove components

PERFORMANCE PROPERTIES

Performance Property	Test Method	Result
Hardness	ASTM D 2240	85 Shore D
X-cut Adhesion	ASTM D 6677	Rating 10
Pull off Adhesion	ASTM D 4541	Greater than 8,000 kPa (2,000 psi)
Abrasion	ASTM D 4060	Less than 30 mg loss
Temperature Resistance		Up to 1800 °F (1000 °C)
Viscosity, cP		800 to 1500 cP
Solids Content	ASTM D 1259	50 % (water)
Volatile Organic Compounds	ASTM D 2369	0 grams/liter

PHYSICAL PROPERTIES

Color	Flat Black
No. Components	Single
Air Dry (23 °C / 50% RH)	15 to 20 minutes
Heat Cure	consult with manufacturer
Min Recoat	Dry to touch (print free)
Max Recoat	24 hours
Max thickness per coat	60 microns (wet)
Suggested total film thickness	100 to 200 microns (dry) *consult with manufacturer

MIXING INSTRUCTION

This is a single-component system. THIS PRODUCT CONTAINS HEAVY LOADING OF ADDITIVES. SETTLING IN THE PRODUCT IS COMMON. THE PRODUCT SHOULD BE MIXED FREQUENTLY DURING APPLICATION. Mix contents for 2 to 3 minutes until a uniform colour and consistency is achieved and the product is well dispersed. To ensure complete mixing, scrape sides and bottom of container and continue mixing for an additional 1 or 2 minutes. DO NOT HAND MIX. Begin application immediately – no induction time. Skinning of the product may occur if left open for a period of time.

SURFACE PREPARATION

- 1) Ensure that surface is clean, dry and uncontaminated. Proceed only if the substrate temperature is more than 5°F above the dew point temperature during surface preparation and coating application.
- 2) Abrasive blast clean with abrasive media (30/60 or coarser) garnet, aluminum oxide or appropriate media to achieve the cleanliness and angularity required DO NOT USE steel shot or non-angular media.
For steel surfaces, blast to a White Metal Blast (SSPC-SP5; NACE 1; SA 3):
 - minimum 50 microns (2 mils) to 75 microns (3 mils) profile for high temperature service.

CLEAN-UP AND STORAGE

- 1) Use warm soap and water to clean tools immediately after use.
- 2) Once the coating is dry, the material must be abraded off.
- 3) Store between 10°C(50°F) and 27°C(80°F). DO NOT FREEZE. Use product within 6 months of receiving.

APPLICATION INSTRUCTIONS

Once mixed, the material must be screened with 60 to 80 mesh filter. The product may be applied by airless or conventional spray. Teflon packings are recommended and available from the pump manufacturer. Prior to use, flush all equipment with clean potable water. Frequently mix material during application. If spraying stops for more than 60 minutes, recirculate the material remaining in the spray line. Do not leave product in the hoses for long durations.

Conventional set up

Pressure pot equipped with dual regulators, Material hose: 3/8" I.D. (minimum) with a maximum length of 50', 0.070" I.D. fluid tip and appropriate air cap.

Airless set up

Pump Ratio: 30:1 (minimum), Material hose: 3/8" I.D. (minimum), Tip size: 0.013-0.015", Output PSI: 1750-2400, Filter size: 80 to 100 mesh

The product is applied in thin multiple passes to the desired thickness. The wait time between passes varies based on environmental conditions, substrate type/temperature and final use. Consult with manufacturer on your specific application.

The product must be post cured prior to final application. Consult with manufacturer for post curing instructions.

SAFETY

Before using any products, please refer to the Material Safety Data Sheet (MSDS). Follow standard confined space entry and work procedures, if appropriate.

Wear eye safety protection, chemical resistant gloves. Use NIOSH approved respirator where mist occurs.

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