



REFRACTORY COATING

emisspro® RS12

Doc No.: IFS-D-0010

Last updated: 15 Sep 2021

Rev. 0

DESCRIPTION

emisspro® RS12 is an innovative coating material used for applying on the internal surface of furnace walls that results on increasing radiation efficiency.

emisspro® RS12 coating maximizes and stabilizes the emissivity values over varying Process Temperatures, thus promoting rapid and efficient heat transfer, uniform heating, reduce GHG remissions and extend refractory life.

emisspro® RS12 is used in high temperature industrial applications such as fired heaters, furnaces and kilns etc. The various substrates are applicable with emisspro® RS12 such as firebrick, insulating, firebrick, high alumina brick, castable refractory, plastic refractory and ceramic fiber.

BENEFITS

- Excellent radiation heat transfer in Firebox
- Increase productivity / Energy saving
- Reduce heat loss from Furnace Wall
- Achieve uniform thermal distribution of Furnace
- Reduce Green House Gas (GHG) emissions
- Extend furnace's Refractory Life

FEATURES

- High emissivity
- Excellent thermal shock resistance
- Excellent chemical & abrasion resistance
- Good adhesion
- Eco-friendly
- Simply operation



STORAGE AND HANDLING

- Emisspro® RS12 material shall be stored in the original package until use, in dry and under roof to protect from heat and wetness.
- Recommended material storage temperature is 0 °C – 40 °C. Handle material to avoid long time direct sunlight.
- Use product within 12 months of receiving.
- The product should be placed on a pallet (dimension 1.1 meter x 1.1 meter). Typically, 12 drums would be able to be placed on one pallet. Maximum of 2 stacks of containers (i.e. 24 drums) are allowed for 1 pallet packing (total height of 85 cm).

MIXING INSTRUCTION

The coating may separate into layers during storage. It is recommended that users to mix contents for 3 to 5 minutes and see the homogeneous of product and ensure that the product is well mixed before application.



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SURFACE PREPARATION

Clean fouling scale on refractory surface by using abrasive hand tools and inspect refractory that has no scratch on. Ensure that the refractory surface is not on weak or falling condition.

APPLICATION INSTRUCTION

Applying the emisspro® RS12 onto the refractory surface can be used either airless or conventional spray. It is recommended that user to keep nozzle spraying distance at least 15 – 30 cm from the refractory surface. Coat 1-2 layers. Ensure that it covers all area. Ensure that the coating consumption per m2 is according to specified standard depending on type of refractory.

Base Condition	Consumption Weight	Thickness
Castable	1.1 ~ 1.5 kg/m ²	0.7 ~ 1 mmt
Brick	1.1 ~ 1.5 kg/m ²	0.7 ~ 1 mmt
Ceramic Blanket	1.5 ~ 1.7 kg/m ²	1 ~ 1.2 mmt

CLEANING

- To clean up the coating, rinse all equipment with water.
- Ensure that the spray guns and hoses are cleaned after use (recommended within 4 hours) to prevent nozzle and hose blockage.

SAFETY

Before using any products, please refers to Safety Data Sheet (SDS). Follow standard confined space entry and work procedures, if appropriate. Wear eye safety protection, chemical resistance gloves. Use NIOSH approved respirator where mist occurs.



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PERFORMANCE & PHYSICAL PROPERTIES

PROPERTIES	TEST METHOD	VALUE
Emissivity	Spectrophotometry	0.80 – 0.95
Recommended Service Temp, °C	-	600 – 1200
Adhesion Pressure	ASTM D4541-95	> 900 PSI
Thermal Shock Resistivity	Alternate heat/cold (Ambient - 1200 °C)	> 30 cycles
Abrasion Resistivity, weight loss	ASTM D968	< 50 mg
Color	-	Greenish
Appearance	-	Thick Slurry
No. Components	-	1
Mix Ratio	-	-
Major Constituent	-	Alumina - Silica
Carrier Solvent	-	Water
Solid by Weight, %	-	50 – 60
Wet Density, g/cm³	-	1.65 – 1.75
pH	-	3 – 5
Melting Point	-	2000 – 3000 °C

The above data are typical values of which the properties of the samples tested according to the internal procedure and standard of Texplore generally accepted by our customers for many years. The above data cannot be used for specification or guarantee purpose. Texplore reserves the right to update the above data and change our internal procedure and standard without any prior notice.