

CODE: FR-1600

PRODUCT NAME: Vermiculite & gypsum Based Fire Proofing

General specification:

FR-1600 is fire resistant coating with inorganic (mineral) formulation and is based on vermiculite and gypsum. It is mixed with clean water and applied. ✓

Description: FR-1600 is applied on the steel and concrete surfaces including columns, beams, walls, fittings, floors and platforms in order to reinforce the structure against the fire. ✓

Properties:

The gypsum-based product is resistant and remains resistant during the implementation and after the film formation ✓

It forms a high quality film on the all surfaces including columns, beams and platforms ✓

It does not need additives in order to form a high quality film and is easily applied ✓

It is free of asbestos under OSHA and EPA regulations ✓

It is free of mineral wool and airborne fiber ✓

It is free of toxic and anti-fungal compounds ✓

It is cost-effective economically ✓

It is ready to use and needs no additives ✓

Primer:

FR-1600 should be applied on the surfaces that has alkali-resistant primer ✓

Topcoat:

Generally, it does not need Topcoat. In severe corrosion conditions, the appropriate Topcoat is applied by consulting technical services of Pedram Engineering Group with consideration of environmental conditions. ✓

Dry film thickness:

Recommended thickness depends on the desired rate of resistance to fire. ✓

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Approved by



Physical properties:

property	Method	Standard Performance	TEST RESULT
cure	-	-	By hydraulic set
Color	Normal	-	cream
Density	ASTM E605	290 ± 15% kg/m ³	251
Compressive Strength	ASTM E761	Min 30 Kpa	122
Air Erosion	ASTM E859	Less than 0.27 g/m ²	0
Bond Strength Unprimed Steel	ASTM E736	Min 7 kpa	18
Impact Resistance	ASTM E760	No cracks	No cracks
Deflection Resistance	ASTM E759	No Delamination	No Delamination
Flame spread	ASTM E84	0-25	0
Smoke a Development	ASTM E84	0- 450	0
Corrosion	ASTM E937	Does not promote corrosion of steel	Does not increase corrosion of this product
Thermal conductivity	ASTM C518	N/A	0.078 W/mk
Combustibility	ASTM E136	Non Combustible	Non Combustible
PH value	-	8-11	8.5
packing	-	-	12.5 OR 25 kg
Shelf Life	-	-	Maximum 12 months
ASTM E 119(UL-263) : Standard Test Methods for Fire Tests of Building Construction and Materials These test have resulted in ratings of up to 4 hours for : .Beams .Columns .Roof Assemblies .Joists			
Minimum practical thickness : 8-15 mm when unreinforced, 15 - 30mm when reinforced 217 m ² /tone at 25mm thickness			

Maintenance conditions:

Maintenance conditions	The materials should be stored in dry and covered environment above the ground
Storage temperature and humidity	29 ⁰ C to 66 ⁰ C Relative humidity (0%-90%)

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