

Selection & Specification Data

Generic Type Cementitious inorganic fireproofing formulation.

Description Single powder component mixed with clean, potable water before application. Recommended uses for the fire protection of structural steel and upgrading the fire resistance of existing concrete. Recommended areas of application are refineries, petrochemical, pharmaceutical facilities, pulp and paper mills, offshore platforms, nuclear and conventional power plants, factories, warehouses, institutional and biomedical facilities.

- Features**
- High density
 - High compressive strength
 - Excellent bond strength
 - Excellent physical properties – hard, durable
 - Easily applied by spray or trowel
 - Lightweight – one-fifth the weight of concrete for equal fire protection
 - Nonflammable – during or after application
 - Asbestos-free – complies with EPA and OSHA regulations
 - Chloride and sulfide free – no special priming required
 - Non-friable – high impact strength
 - Single package – mixed with clean, potable water at the job site
 - Investigated for exterior use by Underwriters Laboratories, Inc
 - Quality Manufactured – under strict Carboline quality standards
 - UL factory inspection service
 - Unique crack-free formulation

Finish If a smooth finish is required, this may be done by trowel, roller or brush typically within 1 to 2 hours after final application of Pyrocrete 241 HD.

Primers Pyrocrete 241 HD neither promotes nor prevents corrosion. The fireproofing should not be considered as part of the corrosion protection system. For applications where primers are required, use an appropriate alkaline resistant primer. U.L. Primer requirements for contour applications where primers are recommended, Pyrocrete 241 HD must meet minimum U.L. bond strength criteria. Contact the Carboline Fireproofing Division for other approved primers.

Selection & Specification Data (cont.)

Topcoats Generally not required. In severely corrosive atmospheres, consult Carboline Technical Service for selection of the coating most suitable for the operating environment.

Dry Film Thickness Recommended thickness depends on desired rating and assembly to be fireproofed. See attached design details.

Temperature Resistance Not recommended for use as a refractory cement or where operating temperatures exceed 200°F (93°C).

Physical Data (Typical Values)

Color	Non-Uniform	Speckled Gray
Density	ASTM E 605 ⁽¹⁾	55 lbs/ft ³ (Minimum)
Durometer Hardness (Shore D)	ASTM D 2240	65
Compressive Strength	ASTM E 761	1,728 psi
Coefficient of Thermal Expansion		4.9 x 10 ⁻⁶ (inch / inch °F)
Bond Strength Unprimed Steel	ASTM E 736 (Modified)	19,440 psf (average)
Bond Impact	ASTM E 760	Pass
Impact Resistance	ASTM D 2794	Indents at 20 foot pounds
Deflection	ASTM E 759	Pass
Average Flexural Strength	ASTM D 790	595 psi
Flame Spread	ASTM E 84	0
Smoke Development	ASTM E 84	0
Maximum Strain	ASTM D 790	0.0074 in/in
Corrosion	ASTM E 937	0.00 gm/mm ²
Insulation "K" Factor	ASTM C 177	1.28 BTU-in./hr.-ft ² -°F
Specific Heat		0.36 BTU/lb°F
Shrinkage		<0.5%
Coverage 50 lb. bag ⁽²⁾		12 Bd.Ft.
Shelf Life		Two years
(1) Air dry at ambient conditions until constant weight. Do not force dry. Use ASTM E 605 Positive Bead Displacement modified to use 1 mm ceramic beads.		
(2) Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.		
Test reports and additional data available upon written request.		
Physical property data was derived using 4 ¾ gallons of water per 50 lb. bag. To achieve the above stated coverage, refer to the Pyrocrete 241 HD application instructions.		

Pyrocrete® 241 HD

Approvals

Pyrocrete 241 HD has been tested by Underwriters Laboratories, Inc. and is classified for exterior or interior use. It is listed under the following designs:

ASTM E119 (U.L. 263, NFPA 251)

- Columns - X732,X733,X735,X736,X743,X744,Y707,Y708
- Roof Assembly – P734, P735, P736, P737, P738, P739, P926, P927, P928, P929, G706, G707, G708, J713, J714, J715, J716
- Beams – N715, N716, N717, N718, N771, N772, N773, N774, N775, S706, S713, S731, S732, S733
- Floor Ceiling Assembly – D744, D767, D768, D769, D770, D771, D772, D773, D774, D775, D776, D777, D927, D928,
- Walls – U704

U.L. 1709

- Rapid temperature rise which simulates a hydrocarbon fire exposure
- Columns – XR701,XR702

Jet-Fire

- Pyrocrete 241 HD has been tested in accordance with the Jet-Fire Resistance Test of Passive Fire Protection Materials, dated 1996.

Packaging, Handling & Storage

Shipping Weight (Approximate)	Bag weight is 50 lbs. (22.7 kg) Truckload = 880 bags 40 palletized bags and pallet is plastic wrapped.
Storage (General)	Material should be kept dry, covered, and off the ground.
Storage Temperature & Humidity	-20°F to 150°F (-29°C to 66°C) 0 to 90% relative humidity
Shelf Life	Min. 24 months

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**



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