

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, bulkheads, 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**
- Easily applied by spray or trowel
 - Lightweight – one-third the weight of concrete for equal fire protection
 - Excellent physical properties – hard, durable
 - 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.

Primers Pyrocrete 241 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. UL Primer requirements for contour applications where primers are recommended, Pyrocrete 241 must meet minimum UL 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 ⁽¹⁾	Non-Uniform	Speckled Gray
Density (Average)	ASTM E 605 ⁽²⁾	55 lbs/ft ³ (Minimum Average)
Durometer Hardness (Shore D)	ASTM D 2240	55
Compressive Strength	ASTM E 761	817 psi
Coefficient of Thermal Expansion		4.5 X10 ⁻⁶ (inch / inch °F)
Bond Strength Unprimed Steel	ASTM E 736	>1146 psf
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	502 psi
Flame Spread	ASTM E 84	0
Smoke Development	ASTM E 84	0
Maximum Strain	ASTM D 790	0.0015 in/in
Corrosion	ASTM E 937	0.00 gm/mm ²
Insulation "K" Factor	ASTM C 177	0.87 (BTU in / hr ft ² ·°F at 75°F)
Specific Heat		0.36 BTU/lb·°F
Shrinkage		<0.5%
Coverage 50 lb. bag ⁽³⁾		14.3 Bd.Ft.
Shelf Life		Two years

- (1) Product color may vary due to variations in color of portland cement.
- (2) Air dry at ambient conditions until constant weight. Do not force dry. Use ASTM E 605 Positive Bead Displacement modified to use 1mm ceramic beads.
- (3) 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.
 Test data above was generated under laboratory conditions. Field testing results may vary.
 Physical property data was derived using 4 ½ gallons of water per 50 lb. bag. To achieve the above stated coverage, refer to the Pyrocrete 241 application instructions.

August 2013 replaces April 2013

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Pyrocrete® 241

Approvals

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

ASTM E119 (UL 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

UL 1709

Rapid temperature rise which simulates a hydrocarbon fire exposure

Columns – XR701, XR702

BS 476: Part 20: Appendix D

Rapid temperature rise which simulates a hydrocarbon fire exposure

Columns

FM Global

Tested and listed by FM Global for LPG vessels at 3/8" (10mm) thickness from face of metal lath for 2 hour rating, including hose stream endurance test.

Lloyd's Register of Shipping – Certification

J-120 Jet Fire Protection – SAS F130010

Det Norske Veritas – Certification

3 Bar Overblast Test

CODE REVIEWS

New York City MEA

172-80-M (Columns)

173-80-M (Columns W14x233)

174-80-M (Beams)

City of San Francisco

164 C57.7A

Los Angeles

RR24763

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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