

Selection & Specification Data

Generic Type	Cementitious inorganic polymer fireproofing formulation
Description	Single powder component mixed with clean, potable water before it is used in application. Recommended uses for the fire protection of structural steel, bulkheads, and upgrading the fire resistance of any existing concrete. Recommended areas of application are petrochemical plants, pharmaceutical facilities, power plants, schools & hospitals, noise abatement and air plenums.
Features	<ul style="list-style-type: none"> • Easily applied by spray or trowel • Lightweight – 1/3 the weight of concrete for equal fire protection • Light weight – Offers a 700 kg/m³ (40 lb/ft³) density. • Coverage – outstanding coverage at 4.3 m² at 10mm (18.3 board feet.) • Excellent physical properties – hard, durable • Nonflammable – during or after application • Asbestos free – complies with EPA and OSHA regulations • Chloride free – no special priming required • Non-friable – high impact strength • UL 1709 Ratings for Hydrocarbon fires. • BS 476 ratings for Cellulosic fires • Approved for exterior use • Quality Manufactured – under strict Carboline quality standards.
Finish	If a smooth finish is required, may be done by trowel, roller or brush typically within 1 – 2 hours after application of PYROCRETE 40.
Primers	PYROCRETE 40 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. For contour applications where primers are recommended, PYROCRETE 40 must meet minimum U.L. bond strength criteria.
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. Refer to relevant design details.
Mix Ratio	22.7 kg (50 lb) Pyrocrete and 18 ± 2.8 litres clean potable water

Typical Physical Data

Colour	Non-uniform	Speckled grey
Density (average)	ASTM E 605 ¹	0.7 kg/lt (40 lb/ft ³)
Durometer		
Hardness	ASTM D 2240	40
Shore D		
Compressive Strength	ASTM E 761	594 psi
Coefficient of Thermal Expansion		5.8 x 10 ⁻⁶ (inch / inch °F)
Combustability	ASTM E 136	Non-combustable
Bond Strength	ASTM E 736	1317 psf
Bond Impact	ASTM E 760	Pass
Impact Resistance	ASTM D 2794	Indendt at 20 ft/lb
Deflection	ASTM E 759	Pass
Average Flexural	ASTM D 790	136 psi
Maximum Strain	ASTM D 790	0.0094 inch/inch
Flame Spread	ASTM E 84	0 (Class A)
Smoke Development	ASTM E 84	10 (Class A)
Corrosion	ASTM E 97	0.00 gm / cm ²
Insulation "K" Factor	ASTM C 177	1.06 BTU in/hr ft ² -F
Specific Heat		0.36 BTU/Lb/°F
Shrinkage		< 0.5%
Coverage ² – 50 lb bag		18.3 board feet 4.3 m ² at 10 mm
Shelf Life		24 months minimum

Notes:

1. Air dry at ambient conditions until constant weight. Do not force dry. Use ASTM E 605 Positive Bead Displacement.
2. Material losses during mixing and application will vary and must be taken into consideration when estimating the job requirements.

Test reports and additional data available on written request.

Pyrocrete® 40

Approvals

Pyrocrete 40 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 – X760, X761, X762, X763, X784, X785, Y707, Y708

Beams - N737, N738, N739, N740, N771, N772, N773, N774, N775, S717, S719, S731, S732, S733

Floor Ceiling Assembly - D774, D767, D768, D769, D770, D771, D773, D774, D775, D776, D777, D927, D928

Roof Assembly - P927, P928, P734, P735, P736, P737, P738, P739, P926, P929

Walls - U704

Precast Concrete & Steel Joist – G706, G707, G708, J713, J714, J715, J716

U.L. 1709

Rapid temperature rise that simulates a hydrocarbon fire exposure.

Columns - XR705, XR706, XR707

Packaging, Handling & Storage

Shipping Weight (approximate)

Bag weight is 50 lbs. (22.7 kg)
Truckload = 880 bags:
40 palletized bags and the pallet is plastic wrapped.

Storage Temperature & Humidity

Store DRY and under cover
-29°C to 66°C
0 to 90% relative humidity

Shelf Life

24 months minimum

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An **RPM** Company

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