

Selection & Specification Data

Generic Type	Cementitious, noncombustible, inorganic fireproofing supplied as a single powder component that is mixed with clean, potable water prior to application.
Description	A single package powder component mixed with clean, potable water before application. Type 5GP™ is intended for application to interior structural columns, beams, joists, decks, walls, roofs, girders, floors and pre-cast concrete units. It is tested and certified for fire resistance ratings up to 4 hours.
Features	<ul style="list-style-type: none"> • Cementitious – Durable, remains in place during construction and beyond. • Fire resistance for all steel sections assessed in accordance with AS 1530.4-2005 ref. BRANZ FAR 3764 • Fire resistance of 3 side exposed beams assessed under requirements of the Building Code of Australia, Specification A2.3, Clause 2 (d) (i) in accordance with AS 4100; ref BRANZ Report FAR 3876 • Provides protection for I-section and hollow beams and columns up to 240 FRR (4 hrs) • Certified data available for limiting temperatures ranging from 350°C to 700°C • Non-combustible • Excellent film builds on all surfaces including columns, beams and decks. • Applicator friendly – High film build, no alum required for increased coverage*. • Asbestos-free – complies with EPA and OSHA regulations. • Mineral Wool free – no airborne fibres. • Styrene free – no toxic decomposition gases. • Economical – Maintains project on budget. • Ready to use – No site additives required. <p>*A-20 Accelerator available if required; fire tested and certified when used at recommended levels (refer to separate data)</p>
Finish	Type 5GP™ is normally left as a sprayed finish.
Primers	Type 5GP™ neither promotes nor prevents corrosion. Fireproofing should not be considered part of the corrosion protection system. <u>Primers are not required or recommended.</u>
Topcoats	Generally not required. In severely corrosive atmospheres, consult Carboline Technical Service for selection of coating most suitable for the operating environment.
Dry Film Thickness	Varies according to required fire rating and steel type. Typically between 10mm and 40mm.
Theoretical Coverage Rate	8.8 square metres per 22.7 kilogram (50 lb) bag at 10 mm thickness and recommended density of 272 kg / m ³ (17 lb / ft ³). (38 bd. feet per 50 lb bag)
Mix Ratio	Optimum: 22.7 kg bag : 43.5 litres water Range: 22.7 kg bag: 41.6 to 45.4 litres water

Selection & Specification Data cont'd

Limitations	Type 5GP™ is not intended for direct exposure to weather or excessive physical abuse. Not recommended for use as refractory cement or where operating temperatures exceed 93°C (200°F). Contact your Carboline representative for alternate product recommendations.
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Substrates & Surface Preparation

Structural Steel & Galvanizing	Degrease where necessary. Wire brush to remove loose rust
Galvanized or MS Plate, Cellular Decking or Ducting Panels	For application to flexing surfaces clean and degrease as above and apply an adhesion tie-in coat of Type DK-3 Spatter Coat uniformly to 70% of the surface.
Concrete	Remove all laitance by sweep abrasive blasting, HP Water-Jetting or acid etching. Apply a tie-in coat of Type DK-3 Spatter Coat uniformly to 70% of the surface.

Physical Data (Typical Values)

Colour	Non-uniform tan	
Density ⁽¹⁾ – ASTM E-605	240 kg / m ³ (15 pcf) min ave	
Combustibility – ASTM E-136	Passed, non-combustible	
Compressive Strength ASTM E-761	112 kPa	
Cohesion / Adhesion ASTM E-736	> 976 kg / m ²	
Impact – ASTM E-760	Passed	
Deflection – ASTM E-759	Passed	
Corrosion of Steel ASTM E-937	Passed	
Air Erosion – ASTM E-859	0.00 gm / m ²	
Surface Burning – ASTM E-84	Flame Spread	0
	Smoke	0
Fungi Resistance ASTM G-21	Passed, no growth	
DOD Classification ASTM E-1042	Type I, NCR 50, class (a) category A	
⁽¹⁾ Air dry at ambient conditions to constant weight. Do not force cure. Use ASTM E-605 bead displacement method.		

Acoustics, ASTM C-384 ⁽¹⁾ (applied to gypsum board)					
Min. Thickness mm	Octave band αP values				NRC ²
	250	500	1000	2000	
7.6	0.21	0.29	0.3	0.84	0.37
11.4	0.29	0.37	0.53	0.70	0.51

¹ Impedance tube method

² Noise Reduction Coefficient. An indicator of the overall noise reduction across frequencies. The higher the NRC value the better the noise reduction (sound absorption). Specifiers are recommended to identify the predominant nuisance noise frequency and select the highest Sabine alpha (αP) for that frequency (250, 500, 1000 or 2000 Hertz).

Test reports and additional information available on written request.

Southwest™ Type 5GP

Approvals

AS 1530.4 - 2005

Type 5GP has been fully assessed in accordance with AS 1530.4; reference BRANZ FAR 3764 (4/11/11).

30 to 240 minute fire ratings for structural beams, columns and hollow sections at Limiting Temperatures ranging from 350°C to 700°C.

AS 4100

Fire resistance of 3 side exposed beams assessed and approved under the requirements of the Building Code of Australia, Specification A2.3, Clause 2 (d) (i) in accordance with AS 4100; reference BRANZ Report FAR 3876

BS 476: Part 21

Reference WFRC Reports 163280, 160007 & 160008

30 to 240 minute fire ratings for structural beams, columns and hollow sections at Limiting Temperatures from 350°C to 700°C.

All testing at maximum permissible design loads according to BS449.

ANSI / UL 263 – Underwriters Laboratories

Extensive testing and approval to UL 263 and ASTM E-119 with over 120 UL and ULC design approvals for fire protection from 1 to 4 hours.

NOTE: Designs are continuously updated and developed. Contact your Carboline Representative for current information.

City of New York Department of Buildings

Type 5GP has been found acceptable for use and approved in accordance with the following MEA report numbers:

MEA-55-04-M Vol. II	Wall (Steel partition)
MEA 56-04-M Vol. II	Beam and Floor / Ceiling*
MEA 409-02-M Vol. III	Columns and Roof* / Ceiling*

* Caution: When applying Type 5GP™ to flexible roof systems or ducting panels or similar, it is required that Type DK-3 Spatter Coat adhesive is used. Also be sure that all roof work is completed and water tight before commencing installation of fire protection. Roof traffic should be limited to maintenance only after fire protection is applied and cured.

Application

Refer to separate "Southwest Type 5GP Application Instructions" data sheet for application and recommended equipment details.

Where necessary refer also to associated products/ additives data sheets:-

- Type DK-3 Spatter Coat
- A-20 Accelerator

Packaging, Handling & Storage

Shipping Weight 22.7 kilogram (50 lb) bags

Storage Temperature & Humidity Store indoors, off the ground and in dry conditions. Material may clump if exposed to moisture or excessive humidity.

Shelf Life 1 year minimum

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

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