RETRO-GUARD® RG

Replacement fireproofing

Product Description

RETRO-GUARD® RG replacement fireproofing is a single component, mill-mixed gypsum plaster based product that requires only the addition of water on the job site to form a consistent, pumpable slurry. RG can be used on structural steel columns, beams, joists, trusses, flat plate cellular and fluted decking.

Features & Benefits

Retro-Guard RG Cementitious Fireproofing has been specifically developed by GCP Construction Products to meet the needs of the fireproofing respray contractor.

Retro-Guard RG offers the following advantages:

- Quick set - in seven to 10 minutes with the use of Monokote Accelerator and Injection System
- Low water ratio - reduced drying time
- Less overspray - work close to steel, less cleanup
- No noxious fumes or irritating particulates released during or after application
- Hard durable surface
- Extra-strength bags for handling and storage ease
- Fully UL fire tested and classified for use with the most postremoval lock downs in the industry
- Dries to a light blue color - easily identified and differentiated

Materials

- Material shall be Retro-Guard RG replacement fireproofing as manufactured by GCP Construction Products.
- Mixing water shall be clean, fresh and suitable for domestic consumption, and free from such amounts of mineral or organic substances as would affect the set of the fireproofing material.
- Lock down agents shall be UL Classified for use with RetroGuard RG. Refer to the ULI Fire Resistance Directory current edition for products listed with Retro-Guard RG under Classification Category CBUI.

Delivery & Storage

- All material to be used for fireproofing shall be delivered in original unopened packages bearing the name of the manufacturer, the brand and the proper Underwriters Laboratories Inc. identification.

Mixing

- Retro-Guard RG shall be mixed by machine in a conventional plaster type mixer or a continuous mixer specifically modified for cementitious fireproofing. The mixer shall be kept clean and free of all previously mixed material. The mixer speed in a conventional mixer shall be adjusted to the lowest speed which gives adequate blending of the material and a mixer density of 40–45 pcf (640–720 kg/m3) of material.
- Using a suitable metering device and a conventional mixer, all water shall be first added to the mixer as the blades turn. Where possible, the mixer blades shall then be stopped and all the Retro-Guard RG fireproofing added. The mixer blades shall then be restarted. If the mixer blades are left running, Retro-Guard RG should be added to the mixer as quickly as possible. Mixing shall continue only until all material is thoroughly wet and no lumps remain. Target density of 43 ± 1 pcf (688 ± 16 kg/m3) is most desirable. Overmixing Retro-Guard RG will reduce pumping rate and will adversely affect final in-place density and hangability. Undermixing Retro-Guard RG will negatively affect in-place density and yield.

Steel Surfaces

- Prior to the application of Retro-Guard RG an inspection shall be made to determine that all steel surfaces are acceptable to receive fireproofing. The steel to be fireproofed shall be free of oil, grease, excess rolling compounds or lubricants, loose mill scale, rust or any other substance that will impair proper adhesion. Where necessary, the cleaning of steel surfaces to receive fire proofing shall be the responsibility of the abatement contractor, or general contractor.
- The project architect shall determine if the painted/ primed steel or lock down agent on the steel to receive fireproofing have been tested in accordance with ASTM E119, to provide the required fire resistance rating.
- Many Fire Resistance Designs allow the use of painted metal floor or roof deck in place of galvanized decking. Painted decking must be UL listed in the specific fire resistance designs and must carry the UL classification marking. Consult your local GCP sales representative for details.
- Prior to application of Retro-Guard RG, a bonding agent, approved by the fireproofing manufacturer, shall be applied to all concrete substrates to receive Retro-Guard RG.
- In advance of the application of the fireproofing, a bond test shall be conducted on all painted/primed steel surfaces or steel that has been covered with a lock down agent to determine if the paint or lock down agent will impair the ambient bond of the fireproofing.
- Where cellular steel decking is present, both cellular and fluted decking requires the application of SPATTERKOTE® SK-3 before application of Retro-Guard RG. The thickness of SK-3 is incorporated into the total fireproofing thickness.
- Fireproofing to the underside of steel roof deck assemblies shall be done only after roofing application is complete and roof traffic has ceased.

Performance Characteristics

PHYSICAL PROPERTIES	RECOMMENDED SPECIFICATION	TYPICAL VALUES	TEST METHOD
Dry density, minimum average	15 pcf (240 kg/m^3)	15 pcf (240 kg/m^3)	ASTM E605
Bond strength	200 psf (9.6 KPa)	339 psf (16.2 KPa)	ASTM E736
Compression, 10% deformation	1,200 psf (51 KPa)	1,483 psf (71.0 KPa)	ASTM E761
Air erosion	Max 0.000 g/ft^2 (0.00 g/m^2)	0.000 g/ft^2 (0.00 g/m^2)	ASTM E859
High velocity air erosion	No continued erosion after 4 hours	No continued erosion after 4 hours	ASTM E859
Corrosion	Does not contribute to corrosion	Does not contribute to corrosion	ASTM E937
Bond impact	No cracking, spalling or delamination	No cracking, spalling or delamination	ASTM E760
Deflection	No cracking, spalling or delamination	No cracking, spalling or delamination	ASTM E759
Resistance to mold growth	No growth after 28 days	No growth after 28 days	ASTM G21
Surface burning characteristics	Flame spread = 0 Smoke developed = 0	Flame spread = 0	ASTM E84
Combustibility	Less than 5 MJ/m^2 total, 20 kw/m^2 peak heat release	Less than 5 MJ/m^2 total, 20 kw/m^2 peak heat release	ASTM E1354
Impact penetration	Max 6 cm^3 abraded	3.9 cm^3	City of San Francisco
Abrasion resistance	Max 15 cm^3 abraded	8.3 cm^3	City of San Francisco

Application

- Application of Retro-Guard RG Fireproofing can be made in the following sequence:
  - For thicknesses of approximately 1⁄2 in. (13 mm) or less, apply in one pass.
  - For thicknesses of 5⁄8 in. (16 mm) or greater, apply second passes after the first coat has set.

The use of the Monokote Accelerator Injection System is required to obtain optimal job site application performance. The use of the Monokote Accelerator Injection System will provide quick set material (usually seven to ten minutes after application), greater in-place yield, and the ability to spray an area in essentially one continuous operation. Second coat can be applied as soon as first material applied has set.

- Prior to application of Retro-Guard RG, a bonding agent, approved by the fireproofing manufacturer, shall be applied to all concrete substrates to receive Retro-Guard RG.
- Spatterkote SK-3 shall be applied to all deck areas when flat plate cellular steel decking is present, and as specified in some roof deck designs. Consult current UL Directory for specific use. Spatterkote shall be applied in accordance with manufacturer's application instructions.
- Retro-Guard RG Fireproofing material shall not be used if it contains partially set, frozen or caked material.
- Retro-Guard RG shall have a minimum average dry in-place density of 15 lbs/ft3 (240 kg/m3).
- Retro-Guard RG shall be mixed with water at the job site.
- Monokote Accelerator when used shall be mixed and used according to the manufacturer's recommendations.
- Retro-Guard RG is applied directly to the steel, at various rates of application which will be job dependent, using standard plastering type equipment or continuous mixer/pump units. A spray gun, with a properly sized orifice and spray shield and air pressure at the nozzle of approximately 20 psi (38 KPa), will provide the correct hangability, density and appearance.

NOTE: If freshly sprayed Retro-Guard RG does not adhere properly, it is probably due to a too wet mix, poor thickness control, or an improperly cleaned substrate.

Temperature & Ventilation

- An air and substrate temperature of 40 °F (4.5 °C) minimum shall be maintained for 24 hours prior to application, during application and for a minimum or 24 hours after application of Retro-Guard RG.
- Provisions shall be made for ventilation to properly dry the fireproofing after application. In enclosed areas lacking natural ventilation, air circulation and ventilation must be provided to achieve a minimum total fresh air exchange rate of 4 times per hour until the material is dry.

Field Tests

- The architect will select an independent testing laboratory (for which the owner will pay) to sample and verify the thickness and density of the fireproofing in accordance with the pro visions of ASTM E605-93, Standard Test Method for Thickness and Density of Sprayed Fire-Resistive Material Applied to Structural Members or Uniform Building Code Standard No. 7-6, Thickness and Density Determination for Spray Applied Fireproofing.
- The architect will select an independent testing laboratory (for which the owner will pay) to randomly sample and verify the bond strength of the fireproofing in accordance with the provisions of ASTM E736.
- Results of the above tests will be made available to all parties at the completion of pre-designated areas which shall have been determined at a pre-job conference.

Safety

- Retro-Guard RG is SLIPPERY WHEN WET. The General Contractor and Applicator shall be responsible for posting appropriate cautionary “SLIPPERY WHEN WET” signs.
- SDS (Safety Data Sheet) for Retro-Guard RG are available on our web site at www.gcpat.com or call toll free at 866-333-3SBM.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate, and is offered for consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations, and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation, or suggestion is intended for any use that would infringe any patent, copyright, or other third party right.

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GCP Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.
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ca.gcpat.com/solutions/products/monokote-fireproofing/retro-guard-rg