MONOKOTE® Z-106G

Gypsum based, medium density, cementitious fireproofing

Product Description

MONOKOTE® Z-106/G is a gypsum based cementitious fireproofing designed to meet commercial and industrial fire protection requirements on structural steel members, floor/ceiling and roof/ceiling, and wall assemblies.

MONOKOTE® Z-106/G is designed to meet interior exposed product requirements where the superior durability and water resistance of Portland cement based products is not required.

Product Applications

MONOKOTE® Z-106/G can be used for interior, exposed applications where light abrasion and damage resistance are desired:

- Elevator shafts
- High bay light manufacturing areas
- High bay mechanical rooms

Benefits

MONOKOTE® Z-106/G offers the following advantages to the architect, owner, applicator and building occupant.

- Low cost - MONOKOTE® Z-106/G is a low cost, medium density product for interior, dry environments subject to intermittent traffic and physical contact.
- Durability - Higher gypsum binder content improves damage resistance and helps maintain the fire resistance for the design life of the building.
- Quick set - May be used with our patented Injection System for quick set and fast double on multiple pass applications.
- Applicator friendly - Low pumping pressures allow use of small diameter hoses for increased maneuverability and greater pumping distances.
- Aesthetics - Can be spray applied to a fine texture finish.
- Non-toxic - The factory-mixed blend of common gypsum, Portland cement and inert materials requires only the addition of water for mixing and application.

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 proper Underwriters Laboratories Inc. labels for fire hazard and fire resistance classifications.
- The material shall be kept dry until ready for use. Packages of material shall be kept off of the ground, under cover and away from sweating walls and other damp surfaces. All bags that have been exposed to water before use shall be discarded. Stock of material is to be rotated and used before its expiration date.

Steel & Concrete Surfaces

- Prior to the application of MONOKOTE® Z-106/G Fireproofing, an inspection shall be made to determine that all steel and concrete 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, excess rust, noncompatible primer, lock down agent or any other substance that will impair proper adhesion. Where necessary, the cleaning of steel surfaces to receive fireproofing shall be the responsibility of the general contractor.
- Prior to application of MONOKOTE® Z-106/G, a bonding agent approved by the manufacturer shall be applied to all concrete surfaces to receive MONOKOTE® Z-106/G.
- The project architect shall determine if the painted/primed structural steel to receive fireproofing has been tested in accordance with ASTM E119, to provide the required fire resistance rating.
- No fireproofing shall be applied prior to completion of concrete work on steel decking.
- Fireproofing to the underside of roof deck assemblies shall be done only after roofing application is complete and roof traffic has ceased.

PHYSICAL PROPERTIES	RECOMMENDED SPECIFICATIONS	TEST METHOD/NOTES	LABORATORY TESTED* VALUE
Dry density	Min. 22 pcf (350 kg/m^3)	ASTM E605	See note below**
Bond strength	Min. 500 psf (23.6 kN/m^2)	ASTM E736	797 psf (37.6 kN/m^2)
Compressive strength @ 10% deformation	50 psi (340 KPa)	ASTM E761	60.8 psi (413.6 KPa)
Deflection and bond impact	No cracking or delamination	ASTM E759 ASTM E760	Pass Pass
Air erosion	0.000 gr/ft^2 (0.000 gr/m^2)	ASTM E859	0.000 gr/ft^2 (0.000 gr/m^2)
Resistance to mold growth	No mold growth after 28 days	ASTM G21	Pass/No growth

* Independent laboratory tested value. Report available upon request.

** All in-place performance tests should be conducted at or below the minimum recommended specification density. Test reports here were conducted at 22 pcf (350 kg/m^3) or below.

Mixing

- MONOKOTE® Z-106/G Fireproofing 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 38–43 pcf (610–690 kg/m^3).
- Using a suitable metering device and a conventional mixer, all water shall be first added to the mixer as the blades turn. Mixing shall continue until the mix is lump-free, with a creamy texture. All material is to be thoroughly wet. Target density of 38–43 pcf (610–690 kg/m^3) is most desirable. Overmixing MONOKOTE® Z-106/G will reduce pumping rate and will negatively effect in-place density and mechanical properties.

Application

- Application of MONOKOTE® Z-106/G Fireproofing can be made in the following sequence:
  1. For thicknesses of approximately 1/2in. (13 mm) or less, apply in one pass.
  2. For thicknesses of 5/8in. (16 mm) or greater, apply subsequent passes after the first coat has set.
- MONOKOTE® Z-106/G Fireproofing material shall not be used if it contains partially set, frozen or caked material.
- MONOKOTE® Z-106/G shall have a minimum average dry, in-place density of 22 pcf (350 kg/m^3).
- MONOKOTE® Z-106/G is formulated to be mixed with water at the job site.
- MONOKOTE® Accelerator may be used with MONOKOTE® Z-106/G to attain fast set and speed multiple pass application. The MONOKOTE® Accelerator is injected into the MONOKOTE® Z-106/G at the nozzle of the spray gun. MONOKOTE® Accelerator shall be mixed and used according to manufacturers recommendations.
- MONOKOTE® Z-106/G 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 (0.14 MPa), will provide the correct hangability, density and appearance.

Temperature & Ventilation

- An air and substrate temperature of 40 °F (4.4 °C) minimum shall be maintained for 24 hours prior to application, during application and for a minimum of 24 hours after application of MONOKOTE® Z-106/G.
- Provisions shall be made for ventilation to properly dry the fireproofing afier application. In enclosed areas lacking natural ventilation, air circulation and ventilation must be provided to achieve a minimum total air exchange rate of 4 times per hour until material is substantially 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 the applicable building code.
- 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

- MONOKOTE® Z-106/G is slippery when wet. The general contractor and applicator shall be responsible for posting appropriate cautionary “SLIPPERY WHEN WET” signs. Signs should be posted in all areas in contact with wet fireproofing material. Anti-slip surfaces should be used on all working surfaces.
- SDS (Safety Data Sheet) for MONOKOTE® Z-106/G are available on our web site or by calling 866-333-3SBM.

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Last Updated: 2023-06-29
ca.gcpat.com/solutions/products/monokote-fireproofing/monokote-z-106g