

MONOKOTE[®] Z-106/G Product Data Sheet

Medium density, gypsum-based 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.

Performance Characteristics

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

* Actual laboratory tested values meet or exceed GCP's recommended value. Test reports are available on request from your GCP Sales Representative.

** ASTM test methods modified where required, for high density, high performance products

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/m³).
- 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/m³) 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/m³).
- 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 after 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 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.

gcpat.com | North America customer service: 1-866-333-3726

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.

MONOKOTE is a registered trademark, which may be registered in the United States and/or other countries, of GCP Applied Technologies Inc. This trademark list has been compiled using available published information as of the publication date and may not accurately reflect current trademark ownership or status.

© Copyright 2018 GCP Applied Technologies Inc. All rights reserved.

GCP Applied Technologies Inc., 62 Whittemore Avenue, Cambridge, MA 02140 USA.

In Canada, 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

This document is only current as of the last updated date stated below and is valid only for use in the United States. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.com. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2021-07-26

gcpat.com/solutions/products/monokote-fireproofing/monokote-z-106g-product-data-sheet