

MONOKOTE® Z-3306

Thermal Barriers

Product data and application instructions

Product Description

Monokote® Z-3306 Thermal Barrier is a cementitious fire protective coating specifically formulated for application over rigid, urethane and polystyrene foam plastics. Spray applied to interior foam surfaces on walls and ceilings, Z-3306 forms a hard, durable, monolithic thermal barrier against heat and fire.

Z-3306 is a mill-mixed product requiring only the addition of water. It can be easily applied to required thickness in a single pass resulting in an efficient, low cost method of meeting building code and insurance requirements.

In developing Z-3306, GCP Applied Technologies has utilized its experience and technology as the producer of Monokote spray applied fireproofing products—the most widely used structural steel fireproofing brand in North America. Sales and technical personnel located throughout the United States and Canada provide close technical support to contractors, owners and specifiers.

Benefits

While specific requirements differ from locality to locality, the use of foam plastics for most building occupancies is permitted only when they are protected by an approved thermal barrier. Z-3306 has been successfully fire-tested and listed by Underwriters Laboratories Inc. and Factory Mutual. Z-3306 has a proven field and laboratory record of performance, reliability, ease of application and low in-place cost.

- **Proven fire test performance**—Z-3306 has successfully passed UL requirements as a thermal barrier over foam plastics.
- **Economical**—Ease of installation makes Z-3306 a low cost way to protect foam plastics.
- **Workable**—After being spray applied, Z-3306 may be lightly trowelled.
- **Damage resistant**—Z-3306 dries to a hard, durable surface which resists damage.

Test Agency	Test Method	Substrate	Thickness of Z-3306	Test Results
Underwriters Laboratories Inc. (ULI) (USA)	UL 1715 (Room fire test) (UBC 26-3)	Urethane foam	3/8 in. (10 mm)	Passed
		Styrene foam	3/8 in. (10 mm)	Passed
ULI (USA)	ASTM E119 Exposure (UBC 26-2)	Urethane foam	3/4 in. (19 mm)	15 minute rating
			1 1/8 in. (29 mm)	30 minute rating
ULI (USA)	ASTM E84 Exposure (Tunnel test)	Urethane foam	1/2 in. (13 mm)	Flame spread 10 Smoke developed 5
		Styrene foam	1/2 in. (13 mm)	Flame spread 5 Smoke developed 0
Intertek	CAN / ULC S101-14	Urethane foam	1 in. (24 mm)	10 minutes
			1 in. (24 mm)	20 minutes
			1 in. (24 mm)	40 minutes
ULC (Canada)	CAN4-S124M	Urethane foam	7/8 in. (21 mm)	Classification A
			11/16 in. (16 mm)	Classification B
			13/16 in. (20 mm)	Classification C
			11/16 in. (16 mm)	Classification D
Intertek	NFPA 286	Urethane foam	(23 mm)	Passed
Factory Mutual Systems	FM 4975	Urethane foam	7/8 in. (21 mm)	Delay ignition 10-15 minutes
		Styrene foam	1 1/8 in. (29 mm)	Delay ignition 10-15 minutes

*Test results are based on ASTM E119 testing. CAN/ULC-S101 is equivalent to ASTM E119.

- **Humidity resistant**—Z-3306 can be used in high humidity conditions and reduces sweating often experienced in vegetable storage areas.
- **Washable**—When trowelled and painted, Z-3306 can be washed and cleaned.

Physical Properties

- **Bond strength**—500 lbs/ft²
- **Color**—Grey or off-white
- **Theoretical yield**—25 bd ft/bag (50 ft² at ½ in. thickness)

Installation

Z-3306 is packaged in poly-lined bags for easy handling and storage.

Firebond Concentrate (bonding agent) must be applied to all surfaces before application of Z-3306.

Z-3306 is mixed with water in a plaster-type mixer to form a consistent, pumpable slurry. This slurry is then spray applied.

Where desired, the natural sprayed texture of Z-3306 can be lightly trowelled to form a semi-smooth, paintable surface. A thin (nominal 1/16 in.) latex stucco overspray may be applied to form a hard eggshell finish, capable of withstanding significant physical contact and surface abrasion.

Typical Applications*

Z-3306 may be used to protect foam plastics in many types of buildings. The following is a brief list of typical applications:

- Breweries, freezers and coolers
- Controlled atmosphere apple, potato and vegetable storage
- Ice arenas and recreation centers
- Indoor tennis courts and swimming pools
- Pig and dairy barns
- Seed storage and processing
- Water treatment plants

* **NOTE:** Many food processing applications require local inspection agency approvals in advance of installation.

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

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

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