

## DESCRIPTION

ISOLATEK Type 400 is a Portland cement based, wet mix, medium density Spray-Applied Fire Resistive Material (SFRM) designed to provide fire protection for structural steel in commercial and high rise construction. The durable surface and Portland cement based formulation make it well suited for applications in either unconditioned or conditioned areas. ISOLATEK Type 400 is used in areas which may be subject to higher levels of abuse and elevated humidity such as mechanical and electrical rooms, parking garages, elevator shafts, etc. and meets the current IBC high rise bond strength requirement of  $\geq 430$  psf and 1,000 psf.

In addition to fire resistance, ISOLATEK Type 400 also provides thermal benefits. As a thermal insulator, it is effective in reducing heat loss, particularly when applied to the underside of a roof deck. The R-value added by ISOLATEK Type 400 may also allow a reduction in roof insulation.

## PRODUCT ADVANTAGES

- Meets or exceeds industry in-place performance standards
- Portland cement based product is extremely durable and ideal for areas where resistance to physical abuse, abrasion forces and impact is required
- Offers the best fire resistance performance per unit thickness and greatest productivity of any medium density SFRM
- Cost effective, clean and neat in appearance

### Thermal Performance

Product	Conductivity(k)*	Resistance (R/inch)
ISOLATEK Type 400	0.0712 W/m•K @ 24°C (0.494 BTU in/hr ft²•F @ 75°F)	2.02

\*When tested in accordance with ASTM C518

### Physical Performance

Characteristic	ASTM Method	Standard Performance*	Tested Performance**
Density	E605	353 kg/m³ (22 pcf)	405 kg/m³ (25.3 pcf)
Combustibility	E136	Noncombustible	Noncombustible
Cohesion/Adhesion	E736	20.6 kPa (430 psf)	409.7 kPa (8,556 psf)
Deflection	E759	No Cracks or Delaminations	No Cracks or Delaminations
Bond Impact	E760	No Cracks or Delaminations	No Cracks or Delaminations
Compressive Strength	E761	351.7 kPa (7,344 psf)	1,058.7 kPa (22,112 psf)
Air Erosion Resistance	E859	Less than 0.27 g/m² (0.025 g/ft²)	0.000 g/m² (0.000 g/ft²)
Corrosion Resistance	E937	Does Not Promote Corrosion of Steel	Does Not Promote Corrosion of Steel
Sound Absorption	C423		13 mm (0.60 NRC 1/2") on deck and beam
Cone Calorimeter	E1354	No Flaming or Heat Release	No Flaming or Heat Release
Fungal Resistance	G21	No Growth After 28 Days	Passed

\* Standard performance based on industry standards and practices. Refer to UL design for density requirement.

\*\* Values represent independent laboratory tests under controlled conditions.

## FIRE TEST PERFORMANCE

ISOLATEK Type 400 has been extensively tested for fire resistance and is rated for up to 4 hours for floor assemblies, beams, joists, columns, and roof assemblies.

- Classified by UL in accordance with ANSI/UL 263 (ASTM E119)
- Classified by UL in accordance with CAN/ULC-S101 (ASTM E119)

ISOLATEK Type 400 has also been tested for surface burning characteristics in accordance with ASTM E84 and is rated Class A.

Flame Spread .....0      Smoke Developed .....0

## CODE COMPLIANCES

ISOLATEK Type 400 satisfies the requirements of the following:

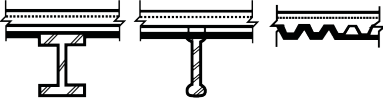
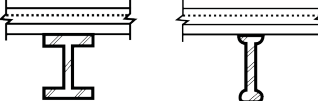
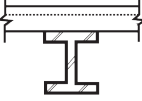
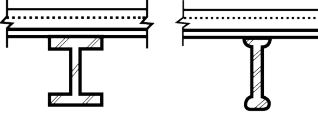
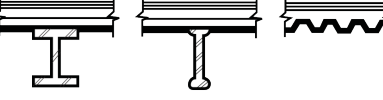
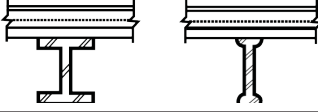
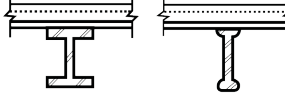
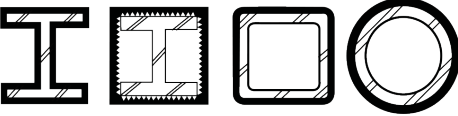
- IBC® - INTERNATIONAL BUILDING CODE®
- City of Los Angeles (LADBS, Category 1 Material)
- NBC - National Building Code of Canada
- AC23 and AC10 Requirements (UL ER13348-01)

## MAJOR SPECIFICATIONS

ISOLATEK Type 400 complies with the requirements of the following specifications:

- MasterSpec®, Section 078100 APPLIED FIREPROOFING (AIA)
- MasterFormat® 2014, Section 07 81 00 Applied Fireproofing (CSC,CSI)
- Unified Facilities Guide Specification, UFGS 07 81 00 Spray-Applied Fireproofing (USACE, NAVFAC, AFCEC, NASA)
- Master Construction Specifications, Number 07 81 00 Applied Fireproofing (VA)
- Code of Federal Regulations, Title 40 Protection of the Environment (EPA)
- PBS-P100, Facilities Standards for the Public Buildings Services (GSA)

## UL Fire Resistance Ratings and Designs

System or Component	Rating (HR) Designs	Design Details
Floor Assemblies - Protected Deck	1, 1 1/2, 2, 3 D759	
Floor Assemblies - Unprotected Deck	1, 1 1/2, 2, 3 D902	
Floor Assemblies - Pre cast Concrete	2, 3, 4 J804 2, 3, 4 J805 1, 1 1/2, 2, 3, 4 J809	
Beam or Joist Only - Floors	1, 1 1/2, 2, 3, 4 N759 1, 1 1/2, 2, 3 N761	
Roof Assemblies - Protected Deck	1, 1 1/2, 2 P719 1, 1 1/2, 2, 3 P723	
Roof Assemblies - Unprotected Deck	1, 1 1/2, 2 P908 1, 1 1/2, 2 P922	
Beam or Joist Only - Roofs	1, 1 1/2, 2, 3, 4 S721 1, 1 1/2, 2, 3, 4 S729	
Columns, W6x9 through W14x730 Pipe and Tube Steel	1, 1 1/2, 2, 3, 4 X790	

The above represents the most common UL Designs which utilize ISOLATEK® Type 400. Please refer to the UL Directory for additional designs or the actual design for beam sizes, deck profiles, electrification details, roof insulation types and other construction details.

The performance data herein reflects Isolatek International's expectations based on tests conducted in accordance with recognized standard methods under controlled conditions. The applicator, general contractor, property owner and/or user MUST read, understand and follow the directions, specifications and/or recommendations set forth in Isolatek International's publications concerning use and application of these products, and should not rely merely on the information contained in this product data sheet. Isolatek International is not responsible for property damage, bodily injuries, consequential damages, or losses of any kind that arise from or are related to the applicator's, general contractor's or property owner's failure to follow the recommendations set forth in Isolatek International publications.

Isolatek International provides passive fireproofing materials under the CAFCO® and FENDOLITE® trademarks throughout the Americas and under the ISOLATEK® trademark throughout the remainder of the world.



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