

ISOLATEK INTERNATIONAL PRESENTS

Isolutions

Information & Solutions For Design & Construction Professionals

January 2003

Number 10

Selecting the Appropriate UL Design

The Underwriters Laboratories, Inc. (UL) Fire Resistance Directory – Volume 1 provides design professionals with hourly ratings for floor and roof assemblies, beams, columns, and walls and partitions utilizing Spray-Applied Fire Resistive Materials (SFRMs) as well as many other passive fire protection products.

Selection of the appropriate UL Fire Resistance Design when specifying Spray-Applied Fire Resistive Materials (SFRMs) is of paramount importance. Most UL Designs are specific to an SFRM manufacturer, construction assembly, hourly rating and SFRM type.

The UL Fire Resistance Directory utilizes an alphanumeric system in order to designate the type of assembly being protected and the type of SFRM, Dry-Mix or Wet-Mix, used to protect the construction assembly. Each letter designates a specific type of assembly, while the number following the letter

indicates the type of fire protection material listed in the design.

Assembly types are separated into the following categories along with their corresponding letter designations:

Assembly Type	Series
Floor/Ceiling	D, G
Concrete Slab	J
Floor Beams & Joists	N
Roof/Ceiling	P
Roof Beams & Joists	S
Columns	X and Y
Walls & Partitions	U

The various types of passive fire protection products are categorized along with their corresponding number designations: SFRMs – 700 & 800 Series; Intumescent Coatings – 600 Series; and Rigid Board Fire Resistive Materials – 300 Series. Unprotected Assemblies (not requiring fire protection to the underside of the decking) that utilize these various types of fire protection products for the structural steel members are classified in the 900 Series designs.

Determination of the hourly fire resistance ratings and the construction assemblies requiring the hourly ratings is essential. To select the appropriate UL Design for Floor/Ceiling Assemblies, determine, at minimum, the type(s) of fire protection product to be used, hourly rating requirement, depth of the floor decking, minimum thickness and type of concrete (Lightweight or Normal Weight), and minimum structural steel size.

To select the appropriate UL Design for Roof/Ceiling Assemblies, determine, at minimum, the type(s) of fire protection product to be used, hourly rating requirement, depth of the roof decking, type(s) of insulation used, and the minimum structural steel size.

The UL Fire Resistance Directory, Volume 1 allows for various thickness calculations

for both beams and columns. Typically, the formulas used to calculate SFRM thicknesses for columns are located in the individual UL Design.

If the UL design does not contain a thickness adjustment formula, refer to the front portion of the UL Directory under the section "Adjustment of Sprayed Protection Material Thickness", for both beams and columns.

Hourly ratings are expressed in both Restrained and Unrestrained classifications. The required thickness of fire protection material may vary depending upon the construction assembly's classification. This determination must be made by the structural engineer, and is one of the most important criteria in selecting the appropriate UL design.

Appropriate UL Design selection is critical to providing the required hourly ratings for each specific construction detail.

For Further Information

CAFCO® Technical and Sales Representatives are always available to lend assistance. Additional printed materials, including Material Safety Data Sheets, and other product literature, are available upon request. For more information about our CAFCO® line of sprayed fire protection, thermal and acoustical treatments, CAFCO-BDARD™, and SprayFilm™ Intumescent Coatings, or for the name of the Sales Representative in your area, please contact:

In the United States: Isolatek International, Stanhope, New Jersey Tel: 800.631.9600 Fax: 973.347.9170

In Mexico & Central America: Cafco Mexico S.A. de C.V., Mexico D.F. Tel: 525.254.6683 Fax: 525.531.7826

In Andean Countries: Cafco Andina S.A., Santiago, Chile Tel: 562.378.5120 Fax: 562.378.5121

In Canada: Cafco Industries, Etobicoke (Ontario) Tel: 888.873.0003 Fax: 416.679.2933

ISOLATEK
INTERNATIONAL

For more detailed product information, visit our website at
www.cafco.com or contact us at cafco@isolatek.com



Total Passive Fire Protection