



CARBOLINE FIREPROOFING PRODUCTS SIMPLIFIED GUIDE TO FIRE RESISTANCE RATINGS

SELECTING SPRAY-APPLIED FIRE RESISTIVE MATERIAL DESIGNS FOR UL

Floor-Ceiling Assemblies – One Hour (Joist & Beams)

| | |
|---|---------------------|
| Composite floor – minimum 2 ½” lightweight concrete over 2 ½” – 5” deck | D949 |
| Composite 2 ½” LW/NW concrete over 22 ga. 1 ½” – 3” deck | D788 |
| Composite floor min. 3 ½” NW concrete over 22 ga. | D949 |
| Non-composite 2 ½” LW/NW concrete over various corrugated form decks..... | D788 |
| Pre-cast tees/hollow core slabs, poured in place slabs (see test)..... | J701/J957/J709/J718 |

Floor-Ceiling Assemblies – Two Hour (Joist & Beams)

| | |
|--|---------------------|
| Composite floor – minimum 2 ½” lightweight concrete over 2 ½” – 5” deck..... | D949 |
| Composite 2 ½” LW/NW concrete over 22 ga. 1 ½” – 3” deck | D788 |
| Composite floor min. 3 ½” NW concrete over 22 ga. | D949 |
| Non-composite 2 ½” LW/NW concrete over various corrugated form decks..... | D788 |
| Pre-cast tees/hollow core slabs, poured in place slabs (see test)..... | J701/J957/J709/J718 |

Floor-Ceiling Assemblies – Three Hour (Joist & Beams)

| | |
|---|---------------------|
| Composite floor – minimum 2 ½” lightweight concrete over 2 ½” – 5” deck | D949 |
| Composite 2 ½” LW/NW concrete over 22 ga. 1 ½” – 3” deck | D788 |
| Composite floor min. 3 ½” NW concrete over 22 ga. | D949 |
| Non-composite 2 ½” LW/NW concrete over various corrugated form decks..... | D788 |
| Pre-cast tees/hollow core slabs, poured in place slabs (see test)..... | J701/J957/J709/J718 |

Beams/Joist/Girders Only Designs for Isolated Member Ratings/Substitutions

| | |
|---|------|
| Beams (min. 8X28) supporting metal floor deck with 2 ½” LW/NW concrete..... | N791 |
| Joist (min. 10K1) supporting floor deck with 2 ½” LW/NW concrete..... | S739 |
| Beams (min.6X16) supporting 22 ga. 1 ½” metal roof deck..... | P741 |
| Joist (min.10K1) supporting 22 ga. 1 ½” metal roof deck..... | P741 |

Roof-Ceiling Assemblies 1, 1 ½ and 2 Hours

| | |
|--|-----------|
| Polystyrene board on gypsum wallboard 1 ½” 22 ga. (W6X16, 10K1)..... | P717 |
| Isocyanurate insulation w/wo gypsum wallboard 1 ½” 22 ga. (W6X16, 10K1)..... | P741 |
| Fiberboard/fiberglass insulation 1 ½” 22 ga. (W6X16, 10K1)..... | P701/S739 |
| Lightweight Insulating Concrete Roof Deck..... | P937 |

Columns (1 – 4 hours)

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|----------------------------|-----------|
| W Shapes | X772/Y725 |
| Pipes and Tube Steel | X771 |



CARBOLINE FIREPROOFING PRODUCTS

SIMPLIFIED GUIDE TO FIRE RESISTANCE RATINGS

SELECTING INTUMESCENT FIREPROOFING DESIGNS FOR UL / INTERTEK

Interior Applications (Water Based) - Firefilm III

| | | |
|-------------------------------|---------------------------|------|
| W-Shapes Columns | 1, 1 ½ and 2 hour ratings | X641 |
| Tube Steel Columns | 1, 1 ½ and 2 hour ratings | X642 |
| Pipe Columns | 1, 1 ½ and 2 hour ratings | X642 |
| Restrained/Unrestrained Beams | 1 ½ and 2 hour ratings | N641 |
| Unrestrained Beams | 1 ½ and 2 hour ratings | D941 |
| Unrestrained Beams | 1 hour ratings | D948 |

Interior Applications (Solvent Based) - Thermo-sorb VOC

| | | |
|-------------------------------|------------------|------|
| W-Shapes Columns | 1through 4 hours | X660 |
| Tube Steel Columns | 1through 4 hours | X661 |
| Pipe Columns | 1through 3 hours | X662 |
| Restrained/Unrestrained Beams | 1through 2 hours | N619 |
| Unrestrained Beams | 1through 2 hours | D946 |

Interior Applications (Solvent Based) - Thermo-Sorb 263

| | | |
|-------------------------------|--------------------------|------|
| W-Shapes Columns | 1 through 4 hour ratings | Y642 |
| Tube Steel Columns | 1 through 4 hour ratings | Y643 |
| Pipe Columns | 1 through 3 hour ratings | Y644 |
| Restrained/Unrestrained Beams | 1 through 4 hour ratings | N645 |
| Unrestrained Beams | 1 through 3 hour ratings | D995 |
| Unrestrained Beams | 1 through 3 hour ratings | E704 |

Exterior Applications (Solvent Based) - Thermo-Sorb E

| | | |
|-------------------------------|---------------------------|------|
| W-Shapes Columns | 1, 1 ½ and 2 hour ratings | Y638 |
| Tube Steel Columns | 1, 1 ½ and 2 hour ratings | Y639 |
| Pipe Columns | 1, 1 ½ and 2 hour ratings | Y640 |
| Restrained/Unrestrained Beams | 1 through 3 hour ratings | N643 |
| Unrestrained Beams | 1, 1 ½ and 2 hour ratings | D992 |
| Unrestrained Beams | 1, 1 ½ and 2 hour ratings | E703 |

Exterior Applications (Epoxy Based) - Thermo-Lag E100

| | | |
|-------------------------------|------------------|--------------|
| W-Shapes Columns | 1-3 hour ratings | CC/IF 180-02 |
| Tube Steel Columns | 1-3 hour ratings | CC/IF 180-03 |
| Pipe Columns | 1-3 hour ratings | CC/IF 180-03 |
| Restrained/Unrestrained Beams | 1-3 hour ratings | CC/IF 180-01 |