



CARBOLINE FIREPROOFING PRODUCTS

SIMPLIFIED GUIDE TO FIRE RESISTANCE RATINGS

UL(cUL) and ULC

SELECTING SPRAY-APPLIED FIRE RESISTIVE MATERIAL DESIGNS FOR UL/ULC

Floor-Ceiling Assemblies – One Hour (Joist & Beams)	UL	ULC
Composite floor – minimum 2 ½” lightweight concrete over 2 ½” – 5” deck	D949	F906*
Composite 2 ½” LW/NW concrete over 22 ga. 1 ½” – 3” deck	D788	F817/F818
Composite floor min. 3 ½” NW concrete over 22 ga.	D949	F906*
Non-composite 2 ½” LW/NW concrete over various corrugated form decks	D788	F817
Pre-cast tees/hollow core slabs, poured in place slabs	J957/J718	-

Floor-Ceiling Assemblies – Two Hour (Joist & Beams)	UL	ULC
Composite floor – minimum 2 ½” lightweight concrete over 2 ½” – 5” deck	D949	F906*
Composite 2 ½” LW/NW concrete over 22 ga. 1 ½” – 3” deck	D788	F817/F818
Composite floor min. 3 ½” NW concrete over 22 ga.	D949	F906*
Non-composite 2 ½” LW/NW concrete over various corrugated form decks	D788	F817
Pre-cast tees/hollow core slabs, poured in place slabs	J957/J718	-

Roof-Ceiling Assemblies 1, 1 ½ and 2 Hours	UL	ULC
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)	UL	ULC
W Shapes	X772/Y725	Z805
Pipes and Tube Steel	X771	Z806, Z807, Z810.

Walls & Partitions – Exposed Side only (1 – 4 hours)	UL	ULC
Southwest	U703	-
Pyrolite / Pyrocrete	U704	-

Notes

- a. Red listings denote protected deck designs.
 - b. Minimum Concrete Thickness – General Rule (to avoid spraying Deck with SFRM)
 - a. 1 HR. requires min. 89mm (3-1/2”) NWC **plus deck depth**
 - i. Note. ULC design F906 allows minimum 83mm NWC
 - b. 2 HR. requires min. 114mm (4-1/2”) NWC **plus deck depth**
 - c. Aforementioned based solely on Southwest and A/D product lines.
- * ULC design F906 does not have a OWSJ in the design; reference ULC Rules of Transfer to transfer components.



CARBOLINE FIREPROOFING PRODUCTS

SIMPLIFIED GUIDE TO FIRE RESISTANCE RATINGS

UL(cUL) and ULC

SELECTING INTUMESCENT FIREPROOFING DESIGNS FOR UL / INTERTEK

Interior Applications (Water Based) - Firefilm III		UL	ULC
W-Shapes Columns	1, 1 ½ and 2 hour ratings	X641	Z610, AD/IMF 120-02, Z612, Z626
Tube Steel Columns	1, 1 ½ and 2 hour ratings	X642	Z611, Z629, Z630, Z628, AD/IMF 90-01
Pipe Columns	1, 1 ½ and 2 hour ratings	X642	Z611, Z630
Unrestrained Beams – Assembly	1 ½ and 2 hour ratings	D941	F906
Unrestrained Beams – Assembly	1 hour ratings	D948	F906

Interior Applications (Solvent Based) – Thermo-sorb VOC		UL	ULC
W-Shapes Columns	1, 1 ½ and 2 hour ratings	X660	Z634
Tube Steel Columns	1, 1 ½ and 2 hour ratings	X661	Z635
Pipe Columns	1, 1 ½ and 2 hour ratings	X662	-
Restrained/Unrestrained Beams (Substitution)	1 ½ and 2 hour ratings	N619	-
Unrestrained Beams – Assembly	1 ½ and 2 hour ratings	D946	-

Interior Applications (Solvent Based) – Thermo-sorb 263		UL	ULC
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 (Substitution)	1 through 4 hour ratings	N645	-
Unrestrained Beams – Assembly	1 through 3 hour ratings	D995	-
Unrestrained Beams – Assembly	1 through 3 hour ratings	E704	-

Exterior Applications (Solvent Based) – Thermo-sorb E		UL	ULC
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 (Substitution)	1 through 3 hour ratings	N643	-
Unrestrained Beams – Assembly	1, 1 ½ and 2 hour ratings	D992	-
Unrestrained Beams – Assembly	1, 1 ½ and 2 hour ratings	E703	-

Exterior Applications (Epoxy Based) - Thermo-Lag E100		ITS
W-Shapes Columns	1-3 hour ratings	CC/IF 180-02
Tube & Pipe Steel Columns	1-3 hour ratings	CC/IF 180-03
Restrained/Unrestrained Beams	1-3 hour ratings	CC/IF 180-03



CARBOLINE FIREPROOFING PRODUCTS SIMPLIFIED GUIDE TO FIRE RESISTANCE RATINGS UL(cUL) and ULC

QUICK LINKS & USEFUL INFORMATION

UL Online Directory:

http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.html?utm_source=ulcom&utm_medium=web&utm_campaign=database

ULC Online Directory:

<http://database.ul.com/cgi-bin/XYV/template/LISCANADA/1FRAME/index.html>

ITS Online Directory:

https://bpdirectory.intertek.com/Pages/DLP_Search.aspx

(UL) BXUV Guide Information:

http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=BXUV.GuideInfo&ccnshorttitle=Fire-resistance+Ratings+-+ANSI/UL+263&objid=1074327030&cfgid=1073741824&version=versionless&parent_id=1073984818&sequence=1

(ULC) BXUV Guide Information:

http://database.ul.com/cgi-bin/XYV/template/LISCANADA/1FRAME/showpage.html?name=BXUVC.GuideInfo&ccnshorttitle=Fire-resistance+Ratings&objid=1075952497&cfgid=1073741824&version=versionless&parent_id=1075961941&sequence=1

Southwest SFRM UL Directory Information:

http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=CHPX7.R8213&ccnshorttitle=Spray-applied+Fire-resistive+Materials+Certified+for+Canada&objid=1075162443&cfgid=1073741824&version=versionless&parent_id=1073985044&sequence=1

Carboline SFRM UL Directory Information:

http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=CHPX7.R7209&ccnshorttitle=Spray-applied+Fire-resistive+Materials+Certified+for+Canada&objid=1075321518&cfgid=1073741824&version=versionless&parent_id=1073985044&sequence=1

A/D SFRM ULC Directory Information:

http://database.ul.com/cgi-bin/XYV/template/LISCANADA/1FRAME/showpage.html?name=CHPXC.R8422&ccnshorttitle=Spray-applied+Fire+Resistive+Material&objid=1076813943&cfgid=1073741824&version=versionless&parent_id=1075961941&sequence=1