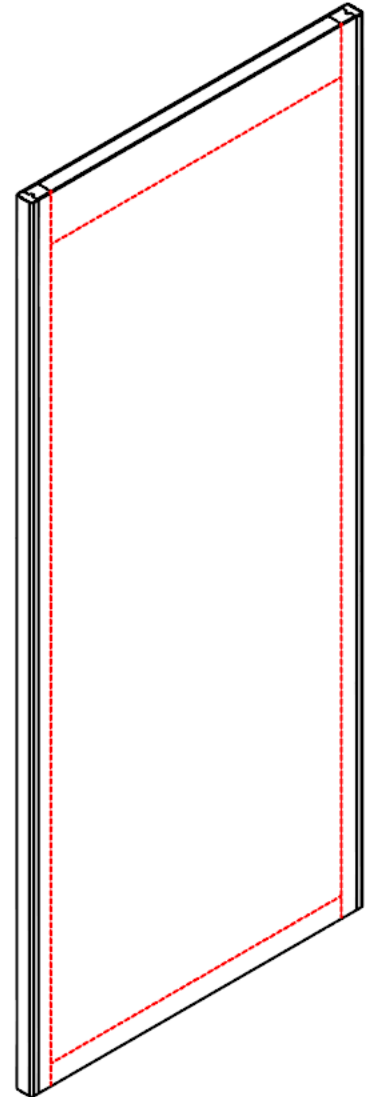# 90 Minute Rated Mineral (FD5-90PP)

Bonded Mineral Core, 5-Ply Construction, Cat. A, PP

*(Fire Test Standards – IBC, UL-10C, CAN/ULC S104, & NFPA 252)*

| | Single Swing | Pair or Double Egress |
|---|---|---|
| **Core Type & Standards** | GP Blue Core: (28-35 lb/ft$^3$) | |
| **Maximum Sizes** | 4'0" x 9'0" | 8'0" x 9'0" |
| **Protection Plates** | Up to 48" (above bottom of door) | |
| **Door Thickness** | 1-3/4" (+/- 1/16") | |
| **WDMA Prefit Tolerance** | Width: (+/- 1/32") Height & Thickness: (+/- 1/16") | |
| **Weight** | 6.58lb/ft$^2$ (3070 Door = 137lbs) (4070 Door = 184lbs) | |
| **Crossband** | High Density FSC Fiberboard | |
| **Blocking** | (Standard) 5" top rail; 2" Bottom Rail; 5" Fixed Internal Stiles (Additional blocking upon request) | |
| **Assembly Adhesive** | Face: Type I (waterproof); Core: Type II (water-resistant) | |
| **Replaceable Edge Stiles & Covers** | Field Replaceable Mineral/SCL Stiles. Acrovyn and/or 20GA #4 finish Stainless Steel Replaceable Covers | |
| **Replaceable Edge Profile** | Beveled, Square | |
| **Lites** | 6" from edges, 5" from hardware or additional cutouts | |
| **Max Visible Glass Area** | 100 in$^2$ | |
| **Lite Frames** | Wood beads; Metal – Painted, Wood Veneered, Acrovyn Wrapped | |
| **Glazing** | Any listed & labeled (90min or greater) | |
| **Louvers** | Not Available | |
| **Electronic Options** | Electronic hardware & raceways Available | |
| **Hinges** | Per NFPA 80 "Table 6.4.3.1" | |
| **Points of Latching** | Singles = 1pt | Pairs = 2pts<br>DE Pairs = 2pts |
| **Pivots** | Offset w/intermediate (Center hung not allowed) | |
| **Locks** | Mortise & Cylindrical (Max 5" Backset) | |
| **Exit Devices** | Surface Vertical Rod (Includes LBR), RIM & Mortised | |
| **Concealed Vertical Rod** | Available (With concealed 5" metal channel at latch edge) | |
| **Flushbolts** | Must Be Extension Type (Metal Door) | |
| **Closing Devices** | Mortised or Surface Mounted | |
| **Door Bottoms** | Mortised or Surface Mounted | |
| **Transoms** | Not Available | |

Standard     (Alternate)

GUARDIAN

INTERTEK
Warnock Hersey
C US

CERTIFIED
cradle to cradle
SILVER

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# Overview of Acrovyn Door Systems

## Features & Benefits

- Acrovyn Doors will not tear, chip, or crack. Key to the doors durability is the rugged Acrovyn face and edge material.
- Acrovyn is 5 times as abrasion resistant as wood and twice as resistant as HPL.
- Integrated Acrovyn or stainless steel radiused edge guards wrap around both door stiles to provide the ultimate damage protection
- If ever damaged, the Acrovyn Door's edge guards & stiles can be easily replaced in the field for a longer door life.*
- Contains no PBT's & is completely free of PVC
- Standard line of Acrovyn Doors are C2C certified at the Silver level

## Acrovyn Face & Edge Finish Options

- 20 standard woodgrain & 2 metal Chameleon Acrovyn finishes available in a smooth suede texture
- 67 standard Acrovyn solid colors
- Stainless steel edges available in 20Ga type 304, #4 finish

## Technical Data

- Standards: WDMA I.S.1-A Extra Heavy Duty Door
- Lites & Louvers: Cutouts, vision kits, glazing, and louvers available*
- Pre-machining available for all mortise hardware from manufacturer's templates & approved shop drawings
- Warranty: Limited Lifetime
- Top & bottom rails are factory sealed with an approved sealant.

    *As noted on the individual product data sheets

### Standard Construction



**U.S. Patents:**
7,621,102; 7,587,876; 7,775,013-B2; 7,886,501-B2.

**U.S. Design Patents:**
D512 785S; D515 713S; D517 224S; D517 701S; D518 185S

# Performance Attributes

## All Door Products*

- **Cycle Slam:** Extra Heavy Duty per WDMA TM-7, -2,000,000 cycles *(2x the WDMA requirement)*
- **Hinge Loading:** Extra Heavy Duty per WDMA TM-8
- **Screw Holding:** Extra Heavy Duty per WDMA TM-10
- **Door Finish Wear Index:** ASTM D4060-90 *(Abrasion Resistance Testing)*
- **Door Finish Chemical Resistance Testing:** ASTM D1308-93
- **Door Finish Impact Resistance:** ASTM D-4226
- **Warp Tolerance:** WDMA TM-2
- **Stain Resistance/Cleanability:** ASTM D1308-93 *(Common Stains Easily Removed)*
- **Resistance to Fungi:** ASTM G-21-96 – Zero Fungal Growth *(On Acrovyn Sheet)*
- **Resistance to Bacteria:** ASTM G-22-96 – Zero Bacterial Growth *(On Acrovyn Sheet)*
- **Resistance to Fungi:** ASTM G-21-2013 – Zero Fungal Growth *(At Replaceable Edge Seam)*
- **Resistance to Bacteria:** ASTM G-22-2013 – Zero Bacterial Growth *(At Replaceable Edge Seam)*

## WDMA I.S.1A Flush Wood Door Minimum Performance Standards

| Performance Attribute | Performance Duty Level | | |
|---|---|---|---|
| | **Extra Heavy Duty** | **Heavy Duty** | **Standard Duty** |
| **Adhesive Bond Durability, WDMA TM-6** | Type I or Type II | Type I or Type II | Type I or Type II |
| **Cycle Slam, WDMA TM-7** | 1,000,000 cycles | 500,000 cycles | 250,000 cycles |
| **Hinge-Loading, WDMA TM-8** | 550 lbs. (2440 N) | 475 lbs. (4110 N) | 400 lbs. (1780 N) |
| **Door Finishes Various ASTM test methods** | TR-6/OP-6 or equal ** | TR-4/OP-4 or equal ** | TR-2/OP-2 or equal ** |
| **Screwholding, WDMA TM-10** Door Face (Blocked or unblocked) Vertical Door Edge Horizontal Door Edge | 550 lbs. (2440 N) 550 lbs. (2440 N) 300 lbs. (1330 N) | 475 lbs. (2110 N) 475 lbs. (2110 N) 240 lbs. (1060 N) | 400 lbs. (1780 N)*** 400 lbs. (1780 N) 180 lbs. (810 N) |
| **Telegraph, Section T-1** | Maximum 0.010 inch in any 3 inch span (0.25 mm in any 76 mm span) | | |
| **Warp Tolerance, Section T-2** | Maximum 0.25 inch in any 3'-6" x 7'-0" (6.4 mm in any 1050 mm x 2100 mm) door section | | |
| **Squareness, Section T-3** | Diagonal variance 1/8 inch (3.2 mm) | | |

 * Acrovyn Door model FC5-NR, meets Extra Heavy Duty for all sections above with the exception of "Screwholding WDMA TM-10 (unblocked)"

 ** Other formulations may exhibit similar performance characteristics, but must meet or exceed the performance levels for the systems specified to be considered as equal.

*** If screw holding power is less than 400 lbs. (1780 N) in a Standard Duty door, blocking or thru-bolts are recommended for operable hardware.

# LEED® v4 Contributions

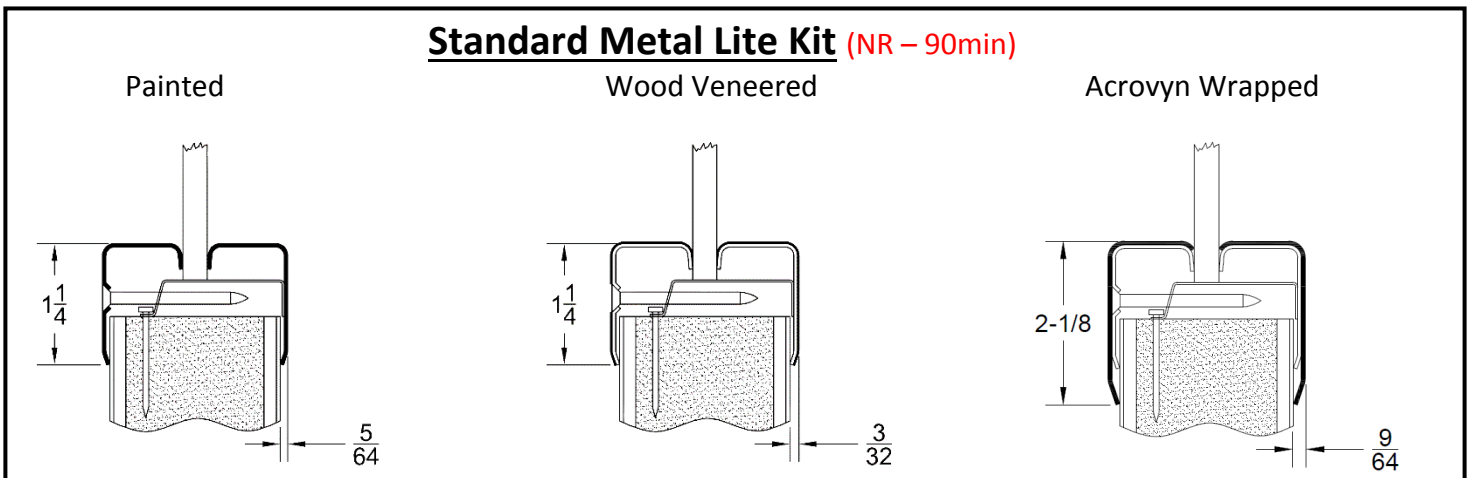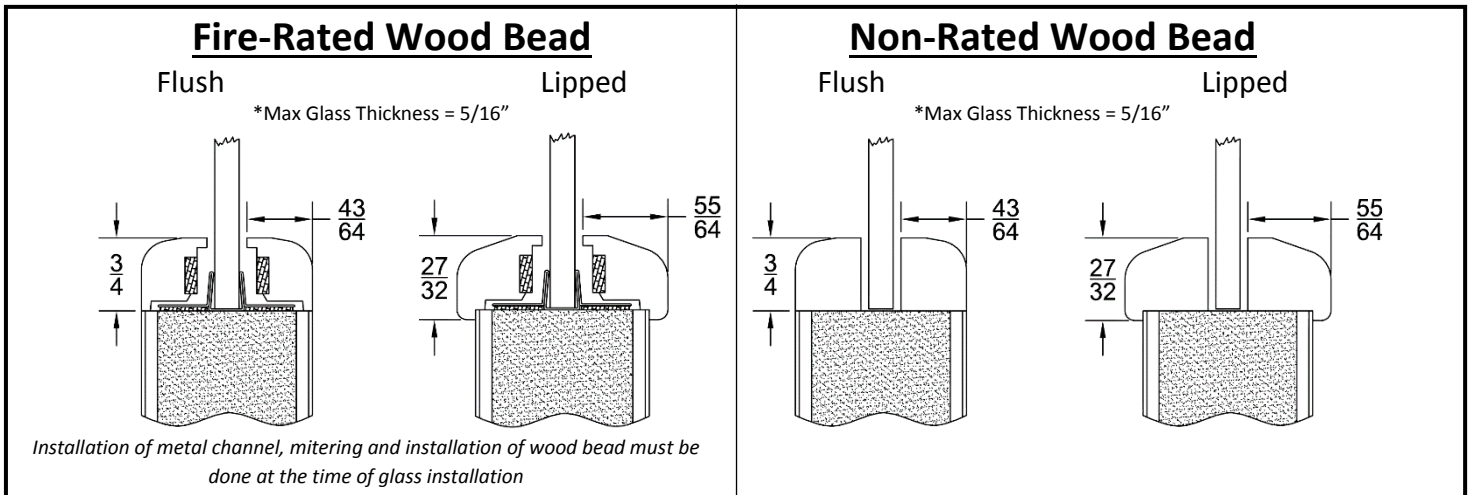| | Building Product Disclosure and Optimization Credits | | | | Indoor Environmental Quality Credits | |
|---|---|---|---|---|---|---|
| | Environmental Product Declarations | Raw Materials FSC/POST/PRE Recycled Content | Material Ingredients (3rd party certification) | Regional Priority (manuf <100 miles away) | Low Emitting Materials (ULEF & NAF) | Emissions And Content (non-emitting) |
| Non-Rated – Agrifiber | C2C Silver | NO/0%/56% | C2C Silver | NO | YES | YES |
| Non-Rated – SCL | C2C Silver | NO/0%/0% | C2C Silver | NO | YES | YES |
| Non-Rated – FSC-PB | C2C Silver | YES/0%/100% | C2C Silver | NO | YES | YES |
| Non-Rated – PB | C2C Silver | NO/0%/58% | C2C Silver | NO | YES | YES |
| Non-Rated – SCL-STC30 | C2C Silver | NO/0%/0% | C2C Silver | NO | YES | YES |
| Non-Rated – SCL-STC43-46 | C2C Silver | NO/0%/0% | C2C Silver | NO | YES | YES |
| 20min – Agrifiber | C2C Silver | NO/0%/0% | C2C Silver | NO | YES | YES |
| 20min – SCL | C2C Silver | NO/0%/36% | C2C Silver | NO | YES | YES |
| 20min – FSC-PB | C2C Silver | Yes/0%/0% | C2C Silver | NO | YES | YES |
| 20min – PB | C2C Silver | No/0%/36% | C2C Silver | NO | YES | YES |
| 45min – Mineral | C2C Silver | NO/0%/36% | C2C Silver | NO | YES | YES |
| 60min – Mineral | C2C Silver | NO/0%/36% | C2C Silver | NO | YES | YES |
| 90min – Mineral | C2C Silver | NO/0%/36% | C2C Silver | NO | YES | YES |
| Lead Lined – NR – Agrifiber | N/A | NO/0%/0% | N/A | NO | YES | YES |
| Lead Lined – NR – SCL | N/A | NO/0%/0% | N/A | NO | YES | YES |
| Lead Lined – NR – FSC-PB | N/A | YES/0%/56% | N/A | NO | YES | YES |
| Lead Lined – NR – PB | N/A | NO/0%/0% | N/A | NO | YES | YES |
| Lead Lined – 20min – FSC-PB | N/A | YES/0%/56% | N/A | NO | YES | YES |
| Lead Lined – 20min – PB | N/A | NO/0%/56% | N/A | NO | YES | YES |

*The U.S. Green Building Council's LEED® green building program is the preeminent program for the design, construction, maintenance and operations of high-performance green buildings. Learn more at usgbc.org/ LEED.*

# LEED® 2009 v3.0 Contributions

| | Materials & Resources Credits | | | Indoor Environmental Quality Credits |
|---|---|---|---|---|
| | **MR 4 Recycled Content** | **MR6 Rapidly Renewable** | **MR 7 Certified Wood** | **IEQ 4.4 No added Urea Formaldehyde** |
| **Non-Rated – Agrifiber** | X | X | X | X |
| **Non-Rated – SCL** | | | X | X |
| **Non-Rated – FSC-PB** | X | | X | X |
| **Non-Rated – PB** | X | | | X |
| **Non-Rated – SCL-STC30** | | | X | X |
| **Non-Rated – SCL-STC43-46** | | | | |
| **20min – Agrifiber** | X | X | X | X |
| **20min – SCL** | | | X | X |
| **20min – FSC-PB** | X | | X | X |
| **20min – PB** | X | | | X |
| **45min – Mineral** | | | | X |
| **60min – Mineral** | | | | X |
| **90min – Mineral** | | | | X |
| **Lead Lined – NR – Agrifiber** | X | X | X | X |
| **Lead Lined – NR – SCL** | X | | | X |
| **Lead Lined – NR – FSC-PB** | X | | X | X |
| **Lead Lined – NR – PB** | X | | | X |
| **Lead Lined – 20min – FSC-PB** | X | | X | X |
| **Lead Lined – 20min – PB** | X | | | X |

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# Lite Kit Options

**Fire-Rated Wood Bead**

Flush                    Lipped

*Max Glass Thickness = 5/16"

43/64

55/64

3/4

27/32

*Installation of metal channel, mitering and installation of wood bead must be done at the time of glass installation*

**Non-Rated Wood Bead**

Flush                    Lipped

*Max Glass Thickness = 5/16"

43/64

55/64

3/4

27/32

**Standard Metal Lite Kit** (NR – 90min)

Painted                Wood Veneered            Acrovyn Wrapped

1 1/4            1 1/4            2-1/8

5/64            3/32            9/64

*ALL DIMENSIONS NOTED ARE NOMINAL*

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# Door Edge Options
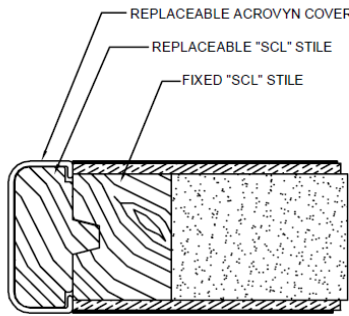
## REPLACEABLE ACROVYN EDGE
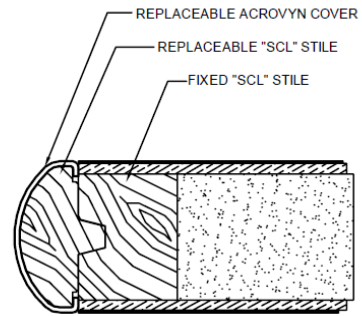STANDARD ON NR THRU 90 MINUTE DOORS*
REPLACEABLE IN FIELD

*Available in either Acrovyn (or) Stainless Steel
(Stainless Steel not available on Radius edge)
(Radius edge not available for fire rated doors)

REPLACEABLE ACROVYN COVER
REPLACEABLE "SCL" STILE
FIXED "SCL" STILE

BEVELED EDGE

REPLACEABLE ACROVYN COVER
REPLACEABLE "SCL" STILE
FIXED "SCL" STILE

SQUARE EDGE
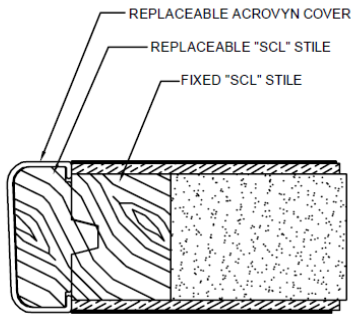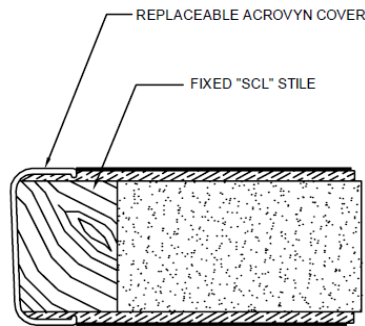
REPLACEABLE ACROVYN COVER
REPLACEABLE "SCL" STILE
FIXED "SCL" STILE

RADIUS EDGE
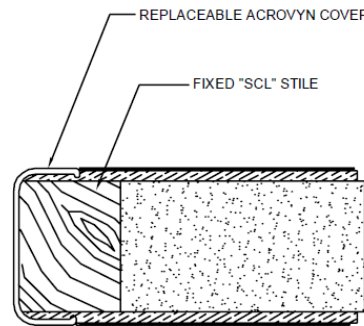
## WRAPPED ACROVYN EDGE
STANDARD ON LL DOORS
REPLACEABLE IN FIELD

*Available in either Acrovyn (or) Stainless Steel

REPLACEABLE ACROVYN COVER
FIXED "SCL" STILE

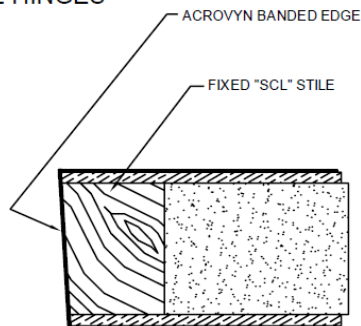WRAPPED BEVELED EDGE
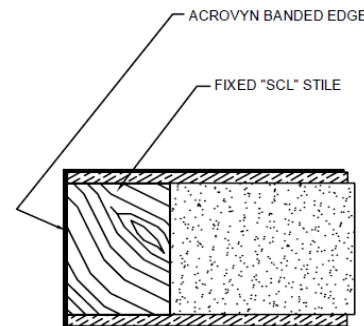
REPLACEABLE ACROVYN COVER
FIXED "SCL" STILE

WRAPPED SQUARE EDGE

## BANDED EDGE
AVAILABLE FOR SPECIAL REQUESTS ONLY
TYPICALLY USED ON HINGE EDGE WITH
EDGE GUARD TYPE HINGES

*Available only in Acrovyn

ACROVYN BANDED EDGE
FIXED "SCL" STILE

BANDED BEVELED EDGE

ACROVYN BANDED EDGE
FIXED "SCL" STILE

BANDED SQUARE EDGE

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