

CERTIFICATIONS AND SPECIFICATIONS

Steel specifications

For commercial, institutional and industrial constructions, Métalec uses a wiped finish galvanized steel designed especially to offer the superior durability which is required in steel doors and frames.

Moreover, a wiped finish galvanized steel offers a uniform surface and a very great bond to apply the paint finish. This steel offers better resistance to corrosion than the cold laminated steel, primed and painted. This material is commercially designed under the name of “galvanneal” or “satin coat”.

A: STANDARD STEEL

- Cold laminated steel of commercial quality according to the “ASTM A653/A653M” standard
 - Designation finish ZF120 (A40) 120 g/m² (-0.40 oz/sq.ft.)
- Minimum total covering

B: OPTIONAL STEEL

- Cold laminated steel of commercial quality according to the “ASTM A653/A653M” standard
 - Designation finish Z275 (G90) 275 g/m² (-0.90 oz/sq.ft)
- Minimum total covering.

Finish

The surfaces where the iron-zinc alloy has been damaged or removed during the manufacturing process, are patched with a primer meeting the “CAN/GCSB 1-GP-181” standard.

All the surfaces have to be free of dust, oil or grease to optimize the paint bond.

The top coat (paint) used on our metal products must be of quality and suitable for this type of application.

Fire resistance certification (WHI)

Putting emphasis on its customers' satisfaction, Métalec is continually developing new fire rated products to meet the constant growing demand of the market.

Among its vast range of products, Métalec manufactures fire rated steel doors and frames according to your needs.

- Métalec's steel doors and frames are approved by the Warnock Hersey (ITS) laboratory highly recognized in the industry;
- The steel doors and frames have been verified, inspected and approved in conformance with:
 - CAN/ULC-S104-M80
 - UBC7-2(1994)
 - UL10(b)
 - NFPA252
 - NFPA80
 - ASTM E152 (Standard methods of fire tests of door assemblies)

A regular verification is made at the factory by a WHI laboratory inspector during the manufacturing.

Métalec has a full range of fire listed products with Warnock Hersey and are available with the following fire ratings:

- 20 min. (D)
- 45 min. (C)
- 90 min. (B)
- 180 min. (A)

See the Fire Labelling Guide tables at the end of this brochure.

FIRE LABELLING GUIDE

Fire rated DOORS

| Maximum rating (hours) | Door types | | | Maximum door size (inside of frames) | Steel thickness (gauge) | Door core | Glazed openings (maximum surface) |
|------------------------|------------|---------|---------------|---|-------------------------|---|--|
| | Single | Double | | | | | |
| | | Regular | Double egress | | | | |
| 3 | X | - | - | 1067 mm x 2286 mm (42" x 90") | 20-18-16 | Honeycomb | n/a |
| 3 | X | - | - | 1067 mm x 2388 mm (42" x 94") | 20*-18*-16* | Honeycomb | n/a |
| 3 | X | - | - | 1067 mm x 2134 mm (42" x 84" (120") with transom) | 20-18-16 | Honeycomb | n/a |
| 3 | - | X | - | 2134 mm x 2286 mm (84" x 90") | 20-18-16 | Honeycomb | n/a |
| 3 | X | - | - | 1220 mm x 2134 mm (48" x 84") | 16 | Vertical stiffeners (wool) | n/a |
| 3 | - | X | - | 2440 mm x 2134 mm (96" x 84") | 16 | Vertical stiffeners (wool) | n/a |
| 3 | X | - | - | 1220 mm x 2134 mm (48" x 84") | 18-16-14 | STC-36 to STC-44 | n/a |
| 3 | - | X | - | 2440 mm x 2134 mm (96" x 84") | 18-16-14 | STC-36 to STC-44 | n/a |
| 3** | X | - | - | 1220 mm x 2440 mm (48" x 96") | 20-18-16 | PCR | n/a |
| 3** | - | X | - | 2440 mm x 2440 mm (96" x 96") | 20-18-16 | PCR | n/a |
| 1 1/2 | X | - | - | 1220 mm x 2440 mm (48" x 96") | 16-14 | Vertical stiffeners (PCR or fiberglass) | 0.065 m ² (100 po ²) |
| 1 1/2 | - | X | - | 2440 mm x 2440 mm (96" x 96") | 16-14 | Vertical stiffeners (PCR or fiberglass) | 0.065 m ² (100 po ²) |
| 1 1/2 | X | - | - | 1220 mm x 2440 mm (48" x 96") | 20-18-16 | Honeycomb or PCR | 0.065 m ² (100 po ²) |
| 1 1/2 | - | X | X | 2440 mm x 2440 mm (96" x 96") | 20-18-16 | Honeycomb or PCR | 0.065 m ² (100 po ²) |
| 1 1/2 | X | - | - | 915 mm x 2134 mm (36" x 84") | 14 | Honeycomb | 0.065 m ² (100 po ²) |
| 1 1/2 | - | X | - | 2134 mm x 2134 mm (84" x 84") | 14 | Honeycomb | 0.065 m ² (100 po ²) |
| 1 1/2** | X | - | - | 915 mm x 2134 mm (36" x 84") | 20-18-16 | Polystyrene or polyisocyanurate | 0.065 m ² (100 po ²) |
| 3/4 | X | - | - | 1220 mm x 2440 mm (48" x 96") | 20-18-16 | Honeycomb | 0.84 m ² (1296 po ^{2***}) |
| 3/4 | - | X | X | 2440 mm x 2440 mm (96" x 96") | 20-18-16 | Honeycomb | 0.84 m ² (1296 po ^{2***}) |
| 3/4 | X | - | - | 1220 mm x 2440 mm (48" x 96") | 14 | Honeycomb | 0.84 m ² (1296 po ^{2***}) |
| 3/4 | - | X | - | 2440 mm x 2440 mm (96" x 96") | 14 | Honeycomb | 0.84 m ² (1296 po ^{2***}) |

* Stainless steel ** Positive pressure

*** Maximum exposed wired glass area is 1296 sq. In. (0,84 m²) per opening and must not exceed either 54" (1372 mm) in height or in width. [Ex. 36" x 36" (915 mm x 915 mm)]

FIRE LABELLING GUIDE

Fire rated FRAMES single or double

| Maximum rating (hours) | Frame types | WELDED | MECH. | Maximum frame size (inside of frames) | Steel thickness | Minimum wall thickness |
|------------------------|---------------------|--------|-------|---------------------------------------|-----------------|---------------------------------------|
| 3 | Single frame | x | x | 1220 mm x 2438 mm 48" x 96" | 16*-14*-12* | 3 1/2" 89 mm min. 12" 304 mm max. |
| 3 | Double frame | x | x | 2438 mm x 2438 mm 96" x 96" | 16*-14*-12* | 3 1/2" 89 mm min. 12" 304 mm max. |
| 1 1/2 | Double egress frame | x | x | 2438 mm x 2438 mm 96" x 96" | 16-14 | 3 1/2" 89 mm min. 12" 304 mm max. |
| 1 1/2 | Single frame | x | x | 1066 mm x 2133 mm 42" x 84" | 18-16-14 | 4 1/2" 114 mm min. 12" 304 mm max. |
| 1 1/2 | Double frame | x | x | 2133 mm x 2133 mm 84" x 84" | 18-16-14 | 4 1/2" 114 mm min. 12" 304 mm max. |
| 3/4 | Single frame | x | x | 914 mm x 2133 mm 36" x 84" | 16-14 | 4 1/2" 114 mm min. 15" 381 mm max. |
| 20 min. | Single frame | x | x | 916 mm x 2133 mm 36" x 84" | 16-14 | 4 1/2" 114 mm min. 17" 492 mm max. |

NOTES:

- ZF120 satin steel or F275 galvanized steel
- A removable vertical mullion is allowed
- Mullion face 1 3/4" min.
- 1 1/4" min. face profil
- Also available in stainless steel 304-#4 and 316-#4

FIRE LABELLING GUIDE

Fire rated **FRAMES** Steel pannel or wired glass

| Maximum rating (hours) | Frame types | WELDED | MECH. | Maximum frame size (inside of frames) | Steel thickness | Minimum wall thickness | Transom maximum dimensions | Maximum lateral dimensions |
|------------------------|---|--------|-------|--|-----------------|---------------------------------------|--|---|
| 3 | Single frame with transom (with mullion) | x | | 1220 mm x 3048 mm 48" x 120" (Door 48" x 96") | 16*-14*-12* | 3 1/2" 89 mm min. 12" 304 mm max. | Width 48" 1219 mm Height 32" 812 mm (Pannel) | n/a |
| 3 | Double frame with transom (with mullion) | x | | 2440 mm x 3048 mm 96" x 120" (Door 96" x 96") | 16*-14*-12* | 3 1/2" 89 mm min. 12" 304 mm max. | Width 96" 3048 mm Height 32" 812 mm (Pannel) | n/a |
| 3 | Single frame with transom (without mullion) | x | | 1066 mm x 3048 mm 42" x 120" (Door 42" x 84") | 16-14 | 3 1/2" 89 mm min. 12" 304 mm max. | Width 42" 1066 mm Height 36" 914 mm | n/a |
| 1 1/2 | Sidelight frame | x | x | 3048 mm x 2184 mm 120"(H.T) x 86"(H.T.) (Single door 42" x 84") (Double door 84" x 84") | 18-16-14 | 4 1/2" 114 mm min. 12" 304 mm max. | n/a | Steel pannel Width 23 1/8" 584 mm Height 41 1/8" 1041 mm |
| 3/4 | Single frame with transom (with mullion) | x | x | 1220 mm x 2438 mm 48" x 120" (Door 48" x 96") | 16*-14*-12* | 3 1/2" 89 mm min. 12" 304 mm max. | Width 48" 1219 mm Height 32" 812 mm Pannel or wired glass 1296 po. ca.** | n/a |
| 3/4 | Double frame with transom (with mullion) | x | x | 2438 mm x 3048 mm 96" x 120" (Door 96" x 96") | 16*-14*-12* | 3 1/2" 89 mm min. 12" 304 mm max. | Width 96" 3048 mm Height 32" 812 mm Pannel or wired glass 1296 po. ca.** 83 612,7 mm ² | n/a |
| 3/4 | Sidelight frame (or window) | x | x | 3048 mm x 2184 mm 120"(H.T) x 86"(H.T.) (Single door 42" x 84") (Double door 84" x 84") | 18-16-14 | 4 1/2" 114 mm min. 12" 304 mm max. | n/a | Pannel or wired glass (1296 po. ca.)** 83 612,7 mm ² |

NOTES:

- ZF120 satin steel or F275 galvanized steel
- (With mullion) = must be welded only
- A removable vertical mullion is allowed
- 1 1/4" min. face profil
- Mullion face 1 3/4" min.
- Also available in stainless steel 304-#4 and 316-#4

** Maximum exposed wired glass area is 1296 sq. In. (0,84 m²) per opening. Ex. 36" x 36" (915 mm x 915 mm) and must not exceed either 54" (1372 mm) in height or 54" (1372 mm) in width.

FIRE LABELLING GUIDE

Fire rated FRAMES Ceramic glass

| Maximum rating (hours) | Frame types | Maximum frame size | Steel thickness | Minimum wall thickness | Transom maximum dimensions | Maximum lateral dimensions |
|------------------------|---------------------------|--|-----------------|---|--|---|
| 1 1/2 | Single frame with transom | 1219 mm x 3251 mm 48" x (128" H.t.) (Door 48" x 108") | 16-14-12 | 90 mm (3 1/2" min.) 241 mm (9 1/2" max.) | 1219 mm x 1219 mm 48"L x 48"H (2116 sq. ca.) | n/a |
| 1 1/2 | Double frame with transom | 2438 mm x 3251 mm 96" (H.t.) x (128" H.t.) (Door 96" x 108") | 16-14-12 | 90 mm (3 1/2" min.) 241 mm (9 1/2" max.) | 1219 mm x 1219 mm 48"L x 48"H (2116 sq. ca.) | n/a |
| 1 1/2 | Sidelight frame | 3911 mm x 3251 mm 154" (H.t.) x 128" (H.t.) (Single door 48" x 108") (Double door 96" x 108") | 16-14-12 | 90 mm (3 1/2" min.) 241 mm (9 1/2" max.) | 1219 mm x 1219 mm 48"L x 48"H (2116 sq. ca.) | 1219 mm x 2336 mm 48"L x 92"H (2116 sq. ca.) |
| 1 1/2 | Window frame with base* | 3911 mm x 3251 mm 154" (H.t.) x 128" (H.t.) | 16-14-12 | 90 mm (3 1/2" min.) 241 mm (9 1/2" max.) | n/a | 1219 mm x 2336 mm 48"L x 92"H (2116 sq. ca.) |

NOTES:

- ZF120 satin steel
- ZF275 galvanized steel
- Welded assembly (splicing allowed but must be welded on site)
- 1 1/4" min. face profil (if door height is more than 96", 2" min. face profil)
- Ceramic glass approved 3/16", *Schott Pyran F*, or *FireLite*
- Maximum exposed ceramic glass area is 2116 sq. In. per opening.
- A glazed side section that extends to the floor must have a minimum baseprofile of a 4" face

* This product is approved only if the window is built with a base that attaches to the floor.