GENERAL: This document defines **SIGNUM 180 Minute Steel Fire Resistant Door specifications** which meet with **IS 3614 and BS 476 Part 22** standards for Fire Resistance. The product conforms **to integrity criteria for 180 minutes and insulation criteria for 180 minutes** (**FD180 ID Fully Insulated** Classification) as mentioned in IS 3614/ BS 476 Part 22. It includes proprietary design and performance specifications.

MATERIALS

Galvanized Steel sheets for frame sections and shutter skin shall conform to IS 277 with zinc coating of 120 g/m2 (total of both sides). Sheet thicknesses shall be as per Fire Type Test Report. Core shall be proprietary SIGNUM fire retardant heat insulating material. Intumescent strip shall be Rigid PVC type of size 20 mm x 4 mm. Frame Anchor Bolts shall be of size M8 x 75 mm, galvanized for corrosion resistance
Vision Panel (optional) shall be of necessary construction to achieve a fire rating of 180 minutes as per standards.

CONSTRUCTION

Frame: Steel frames shall have a single rebated profile of 150 mm x 95 mm with bending radius of 1.4 mm constructed from minimum sheet thickness of 2.0 mm. SIGNUM Proprietary Thermally-Insulated (TI) Frames shall have Built-in Grooves for intumescent strip of size 20 mm x 4 mm on both vertical jambs and horizontal jamb of frame. Frames shall be fabricated at factory pre-equipped with iron-mongery preparation and reinforcements. Frames shall be in knock down form with butt joints for bolted assembly directly at site.

Shutter: Steel shutters shall be 60 mm thick, press formed, double skin hollow type construction with folded interlocking seam joints at stile edges, with minimum sheet thickness of 1.5 mm. Shutter edges shall have built-in Groove for intumescent strip of size 20 mm x 4 mm on all three edges of the shutter except bottom edge. Shutters shall have no screwed, welded/ fuse-jointed or riveted joints on either face. Shutters shall be provided with proprietary fire retardant heat insulating core to be bonded to the inner surfaces of the shutter using suitable permanent glue. Shutters shall be factory prepared with pre-punched cut-outs and reinforcements to receive iron mongery. Flange for vision panel shall be square or rectangular in shape with a profile of 40 x 6 mm, with one side welded to the shutter face and the other side screwed. Screws shall be counter sunk and flat to be flush with beading surface. Clearances at jambs and heads shall not be more than 3 mm between the frame and shutter. Floor level to shutter bottom clearance i.e. undercut shall not be more than 19 mm.

FINISHES

Frame and Shutter surfaces shall be suitably prepared and cleaned with solvents prior to coating. Frames and shutters shall be finished powder coated at factory as per approve RAL colour shades. The dry film thickness (DFT) for the powder coating shall be not less than 50 microns as per IS 13871.
Alternatively frames and shutters can be finished using anticorrosive zinc rich two component epoxy stoving primer (35 microns DFT) and top coat of two component polyurethane paint (35 microns DFT) of approved RAL colour shade for the project

QUALITY ASSURANCE

Steel Fire rated doors shall be manufactured by a unit certified for its quality systems as per ISO 9001: 2015 standards from a recognized certifying authority.
Steel door unit shall be designed and manufactured to comply with IS 3614 specifications and shall have a fire rating label, to indicate fire resistance of door as well as door identification number and date of manufacturing.
Steel door unit shall be GreenPro certified to be eco-friendly by CII-IGBC (Indian Green Building Council).

TESTING

Entire fire door assembly complete with iron mongery shall be type tested and certified for its fire rating by CBRI or CPRI. Type test reports shall be submitted for all projects with no further testing required, unless agreed to between the client and SIGNUM.

PACKAGING

Frames and shutters shall be covered with adhesive based PE sheets to prevent damages to surface finish during transportation and at site. Labels shall be applied to each set as per project schedule for easy identification at site.
Additional protection such as side bolsters from card-board paper shall be used to protect during transit and at-site storage. All knocked down frames shall be stacked flat and shutters flat/ vertically on top of card-board/ other bolsters in clean, dry, well-ventilated areas.

SIGNUM FIRE PROTECTION INDIA PVT. LTD.
An ISO 9001: 2015 Company
PH No. 6, KH No. 202/2 Village Waddhamana,
Taluka Hingna, NAGPUR 440023 INDIA
+91 7104 289289 | marketing@signum.co.in | www.signum.co.in