



Photos and drawings not contractually binding

Assembly, preparation and fire test
of a Plasteurop double leaf door



FIRE RETARDANT SOLUTIONS
PARTITIONS, CEILINGS, JOINERY, ACCESSORIES



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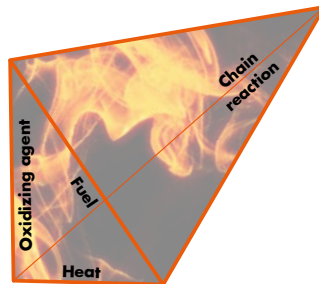


FIRE RISK AND FIRE PROTECTION

Fire risk

The cause of a fire and its spread (*chain reaction*) is the result of a combination of factors represented by a tetrahedron known as the "fire tetrahedron":

- **Fuel:** a solid (*wood, paper, P.I.R., etc.*), a liquid (*petrol, oil, etc.*) or a gas (*natural, butane, etc.*)
- **Oxidising agent:** usually dioxygen
- **Heat source** or activating energy: a flame, a spark, an electric arc, etc.
- **Free radicals:** intermediate molecules produced by the chemical reaction that are at the origin of the chain reaction which feed and spread the fire.



It is the optimum combination of the first 3 factors (*fire triangle*) that triggers the start of the fire.

Fire protection

Fire protection is a general concern.

Compartmenting, known as passive protection, **is essential** in fighting fires. It makes it possible, within a pre-defined time period:

- To protect and safely evacuate people
- To temporarily protect property
- To help emergency services to control the spread of the fire until it is put out.

The letters R E I followed by 2 or 3 numbers indicate the fire resistance of certified (*by an independent organization*) materials:

For example: a material is considered to be REI 120

- **R** indicates mechanical structural strength (*concrete wall, timber beam, metal structure... - not applicable to sandwich panels*)
- **E** indicates leak tightness relative to flames and hot gases
- **I** indicates heat insulation.
- **30** or **60** or **120** indicates the fire retardant time in minutes.

N.B.: In the fire safety sector, there is a difference between "reaction to fire" and "fire resistance" which should not be neglected. These terms are the subject of national and European regulations.

- Reaction to fire is the representation of a material as a fuel for fire (*combustibility, flammability*).
- Fire resistance is the period of time during which the building element plays its role to prevent the fire from spreading

PLASTEUROP, SOLUTIONS FOR EVERY SITUATION



Plasteurop solutions

In order to prevent fire risks, the **Plasteurop research and development department creates solutions and complete ranges** of fire retardant cells up to the standard **EI120** (2 hours fire retardant) and in **two fire directions**.

The use of Plasteurop fire retardant **sandwich panels** and accessories makes possible:

- To **compartment** a single wall or ceiling
- To create a **wall/ceiling cell without any additional framework**
- To install fire retardant solutions in **ultra-clean areas** (*installation on a floor track so that the floor is flush with the bottom side of the panel*)

Semi-flush fire retardant doors and frames complete the range with installation on:

- Sandwich panels
- Concrete walls
- Plasterboard partitions

Tests and certifications

All **Plasteurop fire rated materials are tested and certified** by independent organizations (*Efectis, CSTB...*).

Fire rated solutions are assembled in strict compliance with the supplied certificates. The degree of fire resistance depends directly on them.

Example of a test on a Plasteurop fire rated door (*PSCF*).



Installation



Beginning of the test

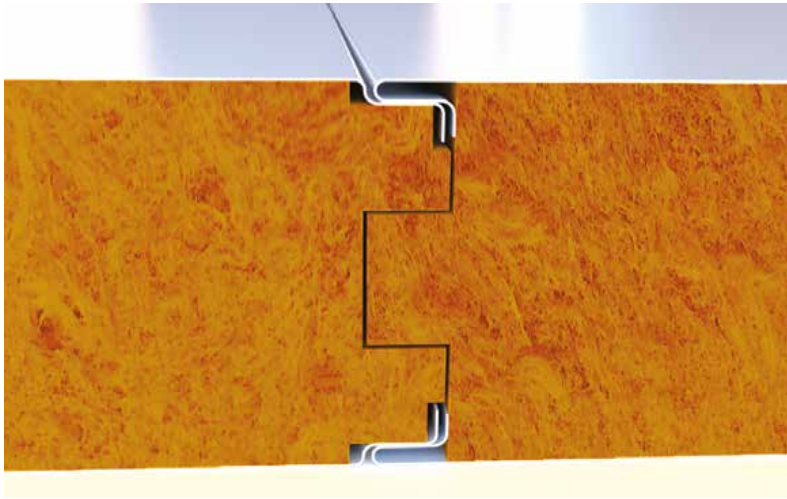


Appearance of smoke



End of the test

PANEL TYPE ASSEMBLING DETAILS



MALE/FEMALE FITTING

Thickness 90mm or 120mm
Walls and/or ceilings



2D HALVED JOINT ANGLE

Wall/wall and wall/ceiling angle
Halved joint produced in the factory using
numerical controlled machinery



3D ANGLE

Wall/wall and wall/ceiling angle
Halved joint produced in the factory using
numerical controlled machinery



CEILING

T profile suspension
Ceiling span = 3 m



INSTALLATION ON A FLOOR TRACK

For resin or PVC floor



Installation with L profiles

Interior and/or exterior



JOINERY AND OPTIONS



EI60 and EI30 SINGLE OR DOUBLE DOORS

OPTIONS:

- Flush glazing windows
- Embedded skirting
- Door closer
- Embedded 1 or 3 points shoot bolt lock
- Emergency push-bar
- 304 or 316 grade stainless steel finish
- Colour finish according to RAL colour chart
- Key operated lock
- 304 stainless steel, 316 stainless steel or PVC kick plate

COMPARTMENT INTERLOCKING:

- Traffic light plate
- Mag lock, electrical strike or electrical lock.
- Position switch
- Access control (badge, digicode, bio-metric, etc.)

ATEX COMPARTMENT INTERLOCKING

- Traffic light plate
- Electrical strike
- Position contact



EI90 DOORS POSITIVE COLD ROOM

OPTIONS:

- Door closer
- Emergency push-bar
- 304 or 316 grade stainless steel finish
- Colour finish according to RAL colour chart
- Stainless steel 304 or 316 kick plate

E30, EI30, EI60 and EI120 VISION PANELS

OPTIONS:

- Double-flush glazing
- Colours according to RAL colour chart