



SOLUTIONS OF TECSEL® SEALINGS: • TECBOR® JOINT PASTE READY TO USE: • CABLE AND PENETRATION SEALS • CABLE TRAY PROTECTION • TECSEL® INTUMESCENT MASTIC • TECSEL® SELF-LEVELLING SILICONE • TECSEL® FOAM • TECSEL® FLEXIBLE SEALANT • TECSEL® LIGHTING COVER • TECSEL® SOCKET COVER • TECSEL® GRILLES • TECSEL® CIRCULAR GRILLES • TECSEL® PILLOWS • TECSEL® COLLARS • MCR MULTICOLLAR • TECSEL® BANDS



IBERIA · LATAM · MIDDLE EAST · NORTH AFRICA · TURKEY



This catalogue is for commercial purposes only and represents no type of validation of certifications. Listed tests are currently in force and as a result, we decline all liability as a result of an improper use of the products.



BUILDING SOLUTIONS FOR YOUR SAFETY

Tecresa Protección Pasiva®, a Spanish company established on 24 July 1998, has been part of the **Mercor® Group** since 19 February 2008. It was originally created to offer, both the national and international market, cutting edge comprehensive solutions for passive protection against fire, focusing on two areas: Smoke vents and materials resistance with products made on our premises, such as the **Tecwool®** mortar or **Tecbor®** boards.

Our main objective is to meet the needs of the current, competitive and ever-changing market providing not only solutions to the development and marketing of fire protection materials but also a wider approach to enable customers to optimise their management, which is a key to competitiveness.

In recent years, **mercortecresa®** has consolidated its leadership in the sector due to its commitment, technology and development of fire prevention systems.

The company policy is based on a continuous improvement of the production capacity, with a permanent focus on service quality and customer satisfaction. Thus, it has been the first quality certified company in the passive protection sector in compliance with standard ISO 9001:2008 and ISO 14001:2004 by Applus. Regarding occupational risk prevention, it has complied with standard OHSAS 18001:2007.

mercortecresa® is in continuous evolution and development, striving to improve every day the service we offer to our customers.

LEGEND






Fire protection.



Smoke and gas protection.



Reference works.

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SEALINGS

SEALING SYSTEMS

TESTS

Mercor tectesa® constantly evolves and adapts to the changes in standards, developing new tests in official labs certified by ENAC or other similar international entities, pursuant to UNE EN, BS, UL, etc.

Our dedication to the comprehensive development of the **Tecsel**® sealing systems has led us to perform customer-specific tests at their request.

TRACEABILITY

The **sealing systems** undergo an internal quality control that provides guaranteed knowledge of the history, location and path of our batches.

QUALITY

All **Tecsel**® products are subject to rigorous controls to ensure they possess the precise specifications of their design.

Our end goal is for our customers to be fully satisfied with the quality of our products.

SPECIALISATION

Our aim is that each individual and concrete case that we come across in our daily work has a specific and effective solution.

APPLICATION

We seek to provide the greatest ease and speed in our assemblies, making our solutions the most competitive on the market.

TECHNICAL ASSISTANCE

The technicians working in our sales department offer personalised customer care and advice, both in terms of building solutions and regulations.

INTERNATIONAL DEVELOPMENT

Both directly and through the **Mercor**® Group, companies **mercor tectesa**® sells its products all over the world, aiming to become a benchmark company in the passive fire protection sector.

SEALING SYSTEMS



Fire protection.



Smoke and gas protection.

Services Sealing Systems

Services crossings are risky volatile points since fire can spread very quickly through them. In most modern buildings, the installations are considerably more complex and, as a result, must be taken into account when designing the fire compartmentalisation.

The risk of propagation in the event of a fire must be reduced by using **Sealing Systems** for penetrations, at the points in which the services pass through different fire compartments.

Most building codes indicate that the level of fire resistance required from anti-propagation elements must be reinforced at the points in which installations such as cables, pipes, conduits, ventilations shafts, etc. pass through these elements. In order to do this, a certified sealing solution must be used that, in event of fire, automatically seals off the intersection and guarantees that this point is at least as fire resistant as the crossed element.

The DB SI indicates that the fire resistance required to the fire compartment elements, must be maintained in the points where such elements are gone through by installations, such as cables, pipeline, ducts, conductions, ventilation ducts, etc.;excluding penetrations in which the crossing section does not exceed 50 cm². To this end, in case of a fire, an element automatically blocking the crossing section and guaranteeing on that point a fire resistance at least equal to that of the traversed element can be made available; for example a blocking intumescent device.

However, when we have several gaps smaller than 50 cm², but close enough to present a significant risk, we shall proceed as follows:

Gaps separated less than 3 m must add their crossing section, for the purpose of determining if they require to maintain the fire resistance of the compartment element or not.



Tecbor® Joint paste ready to use is most commonly used for to protect cables trays in order to ensure that electricity is maintained during a fire, and to form secure joints in ductwork formation.

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TECHNICAL CHARACTERISTICS AND SPECIFICATIONS

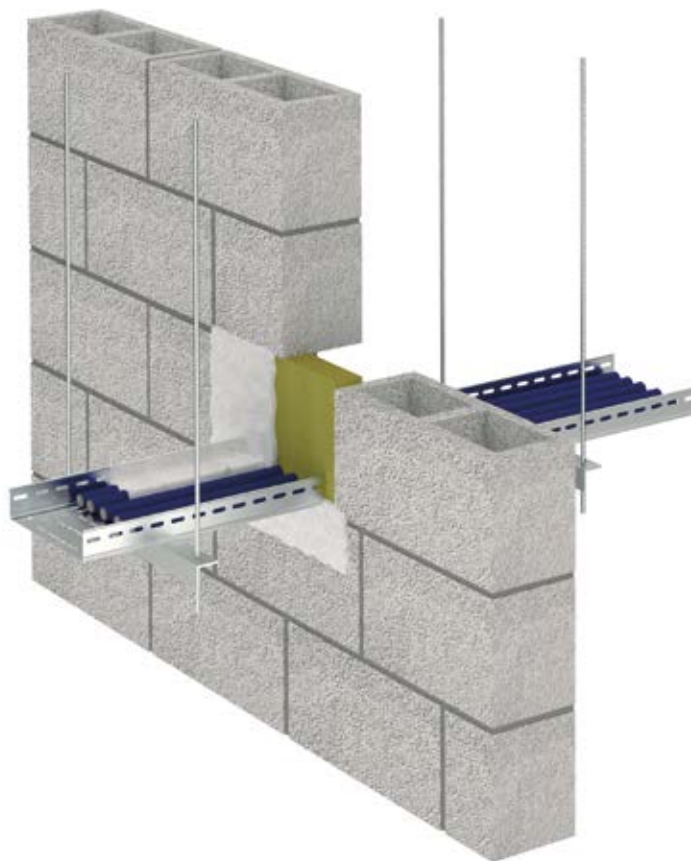
pH-value	Approx. 8.
Colour	Greyish-white.
Odour	Faint.
Viscosity	Light paste.
Flash Point	Non-flammable.
Solids	66% - 76%.
Density	1,55 ± 0,07 g/cm ³ .
Diluent	Add the quantity of water required to obtain the desired viscosity. Dilute at around 5%.
Productivity	Approx. 2,05 kg/m ² for a 1 mm dry-layer.
Drying time	Between 24 and 72 hours, depending on temperature, humidity and the thickness of the layer applied. Full cure is achieved a week after being applied.
Hazard type	No recognised hazards according to EU regulations.
Toxicity	The combustion vapours are toxicologically inoffensive, according to DIN 4102 – A2, 08.09.1986, of RWTH Aachen, issued by Elektrophysik Aachen GmbH, 11.12.1997
Storage	Recommended storage temperature 5 °C - 30 °C.

Tecbor® Joint paste ready to use

SEALING SYSTEMS



1.1 CABLE AND PENETRATION SEALS EI 120 - EI 180 EI 240



Tecbor® Joint paste ready to use

The combination of 145 kg/m³ rock wool with **Tecbor® Joint paste ready to use**, creates a comprehensive sealing system for all types of installations.

It is especially useful for protecting metallic trays through which cables are run and that are located on both decking and walls, as well as on rigid and flexible supports.

Ducts that are not properly sealed off become genuine chimneys in the event of a fire. In addition to the possibility of vertical propagation, the ducts must also be horizontally sealed in order to prevent them from transferring the fire between different compartments on the same floor.

Tecbor® Joint paste ready to use is the perfect solution for preventing the propagation of a fire through the service shafts.

TEST POSITION	THICKNESS	EI
Horizontal	50 mm	120
Horizontal	60 mm	180
Vertical	40 + 40 mm	240
Vertical	50 mm	120



TESTS

Standard: UNE EN 1366-3

Laboratory: CIDEMCO TECNALIA and APPLUS

Test N°: 13742 and 07/32301097 M1.

APPLICATION AND USE

Tecbor® Joint Paste ready to use is a pre-mixed coating.

Before application, it is advisable to stir the paste. Add the quantity of water required to obtain the desired viscosity.

Before application, check that the surfaces are clean and free from any oil or dust.

Apply with airless spray gun. For smaller holes, a trowel or brush may be used.

Once applied, the product can stand temperatures ranging from -40°C to +80°C with no chemical degradation, decolouration or reduced efficiency.

It is not susceptible to humidity and can therefore be used outside. If there is too much humidity when creating the seal, it is advisable to apply the paste in various layers, thereby facilitating the drying process.

Contact our sales department for more information.

Application procedure:

- 1 Services crossings cables trays that cross over various fire compartments.
- 2 Rock wool placement. Measure the gap to be covered and cut the wool to size. Take special care to cover even the smallest cracks that appear on the cables and the supporting structure.
- 3 Apply the **Tecbor® Joint paste ready to use** over both sides of the wool on cables, apply least 200 mm on each side. The paste will be at least 1.1 mm thick when dry.

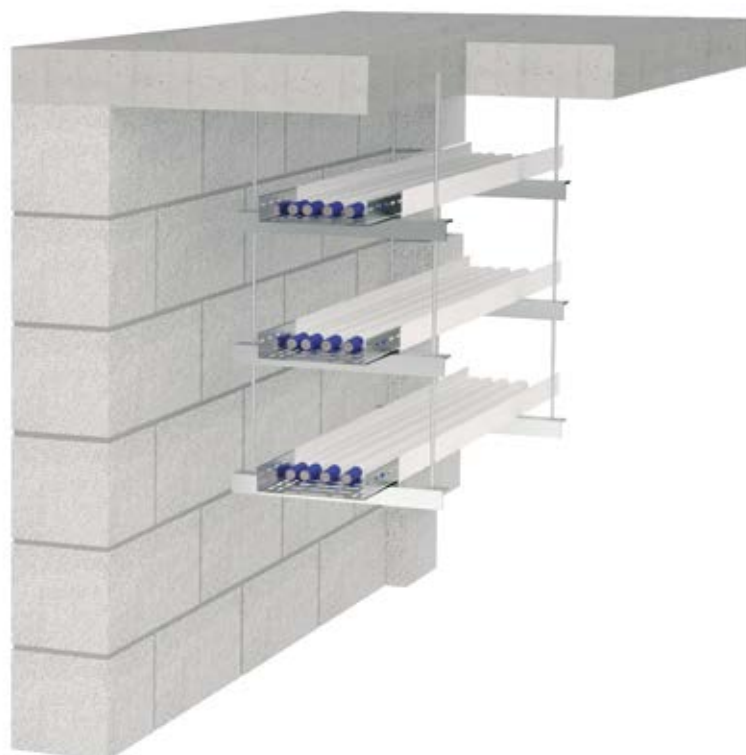


Tecbor® Joint paste ready to use

SEALING SYSTEMS



1.2 CABLE TRAY PROTECTION EI 120



Tecbor® Joint paste ready to use



Provided the electrical system must remain fully operational during a fire, cables must be suitably protected. In public buildings and high-rise buildings, it is critical that the basic systems remain operative in order to carry out a proper evacuation.

Tecbor® Joint paste ready to use applied on cables and metallic cable trays provides the installation with

proper functioning, giving continuity to the power supply as well as avoiding short circuits and derivations.

It is the perfect solution for cable trays which need to be replaced or regularly revised, as it allows to repair or change the cables and also protect them afterwards by applying the paste again.

TESTS

Standard: UNE EN 1363-1 + UL 1709

Laboratory: CIDEMCO TECNALIA.

Test N°: 24602 and 25417.

APPLICATION AND USE

Tecbor® Joint Paste ready to use is a pre-mixed coating.

Before application, it is advisable to stir the paste. Add the quantity of water required to obtain the desired viscosity.

Before application, check that the surfaces are clean and free from any oil or dust.

Apply with airless spray gun. For smaller holes, a trowel or brush may be used.

Once applied, the product can withstand temperatures ranging from -40°C to $+80^{\circ}\text{C}$ with no chemical degradation, decolouration or reduced efficiency.

It is not susceptible to humidity and can therefore be used outdoors. If there is too much humidity when creating the seal, it is advisable to apply the paste in various layers, thereby facilitating the drying process.

Tecbor® Joint paste ready to use can be applied directly to trays and cables.

A 3,6 mm layer of **Tecbor® Joint paste ready to use** over the trays and cables ensures that electricity is continuously supplied for 2 hours. For other fire requirements, please contact our sales department.



TESTS

Standard: EN 60332 - 1 - 2

Laboratory: ATLAL MATERIAL TESTING TECHNOLOGY B.V.

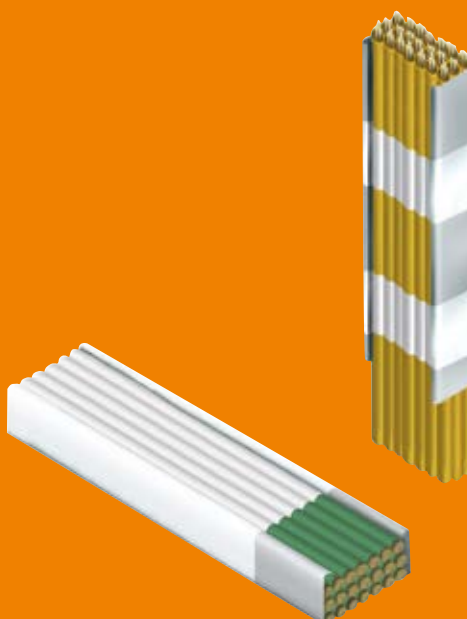
Test N°: L 81498.

APPLICATION AND USE

Tecbor® Joint paste ready to use has also been tested to prevent the vertical propagation of flames in a conductor or cable.

Application procedure as described below 1,9 mm layer must be applied. (on 36 mm cables)

Contact our sales department for more information.



Tecbor® Joint paste ready to use

SEALING SYSTEMS





2 - Tecsel® Intumescent mastic

EI 120 - EI 180 - EI 240

- Internal use: Acrylic resin.
- External use: Neutral curing silicone

Tecsel® Intumescent mastics are intumescent sealants that are specially designed for joints in building construction and door frames, as well as small gaps in firebreak material.

When exposed to fire, **Tecsel® Intumescent mastic** expands, preventing the spread of gases and limiting the increase of temperature through the various compartments of the building.

Fire resistance achieved depends on the size of the joint and the characteristics of the gaps to seal.

Tecsel® Intumescent mastic is very easy to apply. Once dry, it forms a flexible seal with strong adherence to the most commonly building materials. These elastic properties prevent the mastic from transferring any stress to the edges of the joint.



TESTS

Standard: UNE EN 1366-4,

Laboratory: CIDEMCO TECNALIA.

Test N°: 26445-4, 26445-5.

APPLICATION AND USE

Before application, make sure that the surface to be treated is clean and dry.

The mastic is applied manually, by using an injection gun.

Applying an additional substrate of filler inside the joint helps to make sure the correct depth is achieved.

To create an even finish, it is advisable to cover the edges of the joint with adhesive tape or similar and gently smooth over the surface with a slightly wet trowel.

It is important to check that all cracks have been filled in properly and the adhesion level between the substrate and the mastic.

Tecsel® Intumescent mastic for internal use can be painted is adequate whereas paint cannot be applied to the mastic for external use.

For more information, please contact our technical department.

PERFORMANCE

Productivity is calculated using the following formula:

$$L = 300 / A \times P$$

Where:

L= Length achieved per cartridge in metres.

W= Width of the joint in mm.

D= Depth of the joint in mm

SOLUTIONS

TECSEL® INTUMESCENT MASTIC EXTERNAL NEUTRAL CURING SILICONE. MAXIMUM WIDTH 30 MM EXTERNAL USE

Vertical surface				
Width	Depth	Fill	Classification	Type
10	10	PE	EI 120	Single
10	10	PE	EI 180	Double
20	10	PE	EI 240	Double
30	15	PE	EI 240	Double
10	10	LR	EI 240	Single
20	10	LR	EI 240	Double

TECSEL® INTUMESCENT MASTIC INTERNAL ACRYLIC RESIN. MAXIMUM WIDTH 30 MM INTERNAL USE

Vertical surface				
Width	Depth	Fill	Classification	Type
10	10	PE	EI 180	Single
10	10	PE	EI 240	Double
20	10	PE	EI 180	Double
30	15	PE	EI 240	Double
10	10	LR	EI 240	Single
20	10	LR	EI 240	Double



3 - Tecsel®

Self-levelling silicone

EI 240

Tecsel® self-levelling silicone is a fire resistant sealant based on neutral curing and self-levelling silicone rubber. It is designed to be applied to expansion joints on horizontal surfaces that are intended to bear substantial movement.

It is an ideal solution for sealing off openings in slabs, facades and curtain walls.

SILICONA AUTONIVELANTE TECSEL® PROTECCIÓN CONTRA EL FUEGO

Sellador a base de caucho de silicona autonivelante de reticulación neutra resistente al fuego.

APLICACIÓN:

- Antes de la aplicación, la superficie a tratar debe estar limpia y seca.
- La aplicación se realiza manualmente mediante vertido. Solamente válido para juntas horizontales. Aplicación desde la parte superior de la junta.
- Para proporcionar un acabado homogéneo, es recomendable cubrir los bordes de la junta con una cinta adhesiva o similar y pasar suavemente una espátula ligeramente humedecida para alisar la superficie de la junta.
- Es importante comprobar que las hendiduras están rellenas y que el contacto entre la masilla y el sustrato es el adecuado.
- Profundidad en función de la anchura de la junta.
- Es necesario colocar un soporte (lana de roca) como fondo de junta antes de aplicar.
- Válido para juntas que vayan a tener movimiento.

ALMACENAMIENTO:

- Almacenar en lugares secos y fríos.
- Caducidad a los 18 meses (envases cerrados).
- Una vez abierto el envase, debe usarse en 24 horas.

SEGURIDAD:

- Evitar el contacto con la piel y los ojos. En caso de contacto con los ojos aclarar con agua abundante durante al menos 10 minutos.
- Utilizar mascarilla y guantes de PVC apropiados. En caso de contacto con las manos lavar con agua y jabón.
- En caso de ingestión accidental no inducir el vómito y acudir al médico urgentemente.
- Para obtener más información solicita nuestra ficha técnica.

**SILICONA
AUTONIVELANTE TECSEL®
PROTECCIÓN CONTRA EL
FUEGO**



**TECSEL®
SELF-LEVELLING MASTIC
FIRE PROTECTION**



TESTS

Standard: PROTOCOL / UNE EN 1366-4 and UNE EN 1363-1

Laboratory: CIDEMCO TECNALIA.

Test N°: 28751

APPLICATION AND USE

100 kg rock wool must be used as a base. The rock wool prevents stresses from being transmitted to the sealant and allows for an even depth of silicone to be achieved.

In light of the texture of this silicone, it is only applicable to horizontal joints, which in turn must be on horizontal surfaces.

The surfaces onto which it is applied must be dry and free from dust, oils, dirt, loose particles, etc.

Covering the joint edges with adhesive tape or similar in order for an even finish.

It is important to check that all cracks have been filled in properly and the adhesion level between the substrate and the mastic.

Tecsel® self-levelling silicone cannot be painted or varnished.

TECSEL® SELF-LEVELLING SILICONE		
Horizontal surface		
Width x Depth (mm)	Fill	Classification
15 x 10	LR (100 Kg)	EI 240
30 x 20	LR (100 Kg)	EI 240
50 x 30	LR (100 Kg)	EI 240

PERFORMANCE

The following formula is used as a rough guide for performance calculation:

$$L = 1000 / A \times P$$

Where:

L= Length of the joint achieved per litre in metres.

W= Width of the joint in mm.

D= Depth of the joint in mm.

TECHNICAL CHARACTERISTICS AND SPECIFICATIONS

Uncured **Tecsel® Self-levelling silicone**

Appearance	Creamy homogeneous and self-levelling paste.
Skin formation (BS 5889 AP.A)	90 minutes
Curing rate at 23 °C and 55% H.R.	1 mm/day
Lost of volume (DIN 52451)	5 %
Application temperature	+5 a + 50 °C

Uncured **Tecsel® Self-levelling silicone**

(4 weeks at 23 °C and 55% H.R.)

Shore A Hardness (DIN 53505)	14
Elastic recover (NF P85506)	90 %
Elastic modulus 100% (DIN 53504)	0,20 MPa.
(NF P 85507)	0,18 MPa.
Tensile strenght (DIN 53504)	0,60 MPa.
(NF P 85507)	0,50 MPa.
Ultimate Elongation (DIN 53504)	700 %
Movement of the joint in service	25 %
Resistance to temperature in service	+50 a + 150 °C



4 - Tecsel® Foam

EI 120 - EI 180

Tecsel®Foam is a self-expanding, single-component polyurethane highly fire resistant.

Tecsel® Foam are intumescent sealants that are specially designed for joints in building construction and door frames, as well as small gaps in firebreak material.

When exposed to fire, **Tecsel® Foam** expands, preventing the spread of gases and limiting the increase of temperature through the various compartments of the building.

Fire resistance achieved depends on the size of the joint and the characteristics of the gaps to seal.





TEST

Standard: UNE EN 1366-4

Laboratory: CIDEMCO TECNALIA.

Test N°: 26445-6

APPLICATION AND USE

Tecsel® Foam has an excellent adherence to the majority of commonly used building materials. Do not use on PP and PE.

Before application, make sure that the substrate is clean. If the surface requires cleaning, only non-organic solvents can be used. It is advisable to dampen the supporting structure before application as this improves adherence and drying.

Before application, place the adaptor in the valve and shake the aerosol for 20 seconds. Hold the container upside down and apply.

Tecsel® Foam can be applied to joints, gaps and opening on:

- Window and door frames.
- Cable, trays and duct penetrations.
- Joints between ceilings and walls.
- Filling between building elements.
- Thermal insulation in cavity walls.

If necessary, remove the foam with acetone or similar. The application temperature is between 5 °C and 35 °C.

Excess of product can be removed mechanically.

TECSEL® FOAM				
SELF-EXPANDING SINGLE-COMPONENT POLYURETHANE				
MAXIMUM WIDTH 30 MM.				
Vertical surface				
Width	Depth	Fill	Classification	Type
20	190	--	EI 120	--
10	190	--	EI 180	--
30	190	--	EI 120	--
10	70	LR	EI 120	d

TECHNICAL CHARACTERISTICS AND SPECIFICATIONS

Base	Polyurethane.
No longer sticky after*	8 min.
Drying time*	20-25 min.
Hardening time*	2 hours.
Performance	1000 ml given 35-40 l of foam.
Cellular structure	Delicate, with 70% to 80% of its structure made up of cells closed.
Temperatur range	-40 °C to +90 °C (hardened).

* The above data was taken at 20°C and 65% R.H.



5 - Tecsel® Flexible sealant

EI 120 - EI 180

Tecsel® Flexible Sealant is a combination of mineral fibres and intumescent graphite, with a protective plastic coating.

This product is especially designed for expansion joints. Thanks to its versatility and large range of sizes, it is extremely easy to install.

When exposed to fire, **Tecsel® Flexible Sealant** expands, thereby preventing temperatures from rising and limiting the propagation of gases between the different fire compartments.



TEST

Standard: EN 1366-4
Laboratory: CHILTERN.
Test N°: IF11069

The sealant adapts to the joints and can compress down by up to 50%, thereby ensuring that the movements of the joint over its useful life do not affect the stability of the sealant.

The strips are covered by a plastic coating, forming a partial barrier against environmental conditions.

APPLICATION AND USE

Tecsel® Flexible sealant is extremely quick and easy to install. Simply place the strip on the joint that you wish to protect.

TECHNICAL CHARACTERISTICS AND SPECIFICATIONS

Tecsel® Flexible sealant must be stored in a cool, dry place.

WIDTH - THICKNESS	UNITS	GAP LENGHT (mm.)		FIRE RATING - FLOORS	FIRE RATING - WALLS
		MINIMUM	MAXIMUM		
15 x 15 mm.	1	7,5	13	EI 240	EI 240
	1	7,5	13	E 240	E 240
30 x 15 mm.	2	15	25	EI 180	EI 180
	2	15	25	E 240	E 240
25 x 20 mm.	2	13	22	EI 180	EI 120
	2	13	22	E 240	E 240
	1	13	22	E 30	EI 30
	1	13	22	E 240	E 240
40 x 20 mm.	2	22	35	EI 180	EI 120
	2	22	35	E 240	E 240
	1	22	35	EI 30	EI 30
	1	22	35	E 240	E 240
60 x 40 mm.	2	35	50	EI 180	EI 120
	2	35	50	E 240	E 240
60 x 45 mm.	1	35	50	EI 45	EI 45
	1	35	50	E 240	E 240
85 x 40 mm.	2	50	70	EI 180	EI 120
	2	50	70	E 240	E 240
85 x 45 mm.	1	50	70	EI 45	EI 45
	1	50	70	E 240	E 240
120 x 50 mm.	2	70	100	EI 180	EI 180
	2	70	100	E 240	E 240
120 x 60 mm.	1	70	100	EI 45	EI 45
	1	70	100	E 240	E 240



6 - Tecsel® Lighting Cover and Tecsel® Socket Cover

EI 60

Most ceilings, which need to be fire resistance, will usually have some kind of lighting system. In addition more fire-resistant partitions will be equipped with sockets or electrical boxes

To equip these appliances with comprehensive fire protection, **mercor tecresa®** offers the following products:

- **Tecsel® Lighting cover**

- **Tecsel® Socket cover**

Both solutions are a combination of graphite and mineral wool which swells when exposed to flames, sealing any gap and preventing the spread of fire and flames to the adjacent fire sectors.

Clean and light solutions extremely easy to install.



TEST

Standard: BS 476 Part 23

Laboratory: BRE

Test N°: FG8962/208217

APPLICATION AND USE TECSEL® LIGHTING COVER

The protective covers are installed without any kind of additional anchorage.

They are adaptable to any situation thanks to their broad versatility and can be installed from both below and above the ceiling.

A certain level of ventilation is allowed to prevent the overheating on the appliances. Passing of cables through **Tecsel® Lighting Cover** has been satisfactorily tested.

Please ask for further information about each type of installation.

APPLICATION AND USE TECSEL® SOCKET COVER

Tecsel® Socket Covers come in a range of standard sizes and are perfectly adaptable to the boxes with no need for fittings or adhesives.

Please ask for further information about each type of installation.



SOLUTIONS

TECSEL® LIGHTING COVER	
Dimensions (mm)*	Shape
150 x 150	conical
200 x 200	conical
250 x 250	conical
300 x 170	circular
350 x 230	circular
1200 x 600	flat
600 x 600	flat

* Please ask for other measurements.

TECSEL® SOCKET COVER	
FORMAT	DIMENSIONS
Small	152 x 130 x 40 mm
Large	200 x 130 x 40 mm

7 - Tecsel® Grilles

EI 120 - EI 180

A common problem with fire compartmentalisation arises when we require the free circulation of air alongside an effective fire protection system.

Tecsel® Grilles are palusol sheets wrapped in PVC. Palusol is made from sodium silicate, a small amount of organic material and reinforced with fibreglass. Both faces have an epoxy resin layer that protects the intermediate layer from ambient conditions (water, steam and CO₂).

When exposed to temperatures above 100 °C, **Tecsel® Grille** expands and forms a layer of foam consisting of fine, fireproof and compression-resistant pores, acting as a thermal insulator, preventing the transfer of heat, flames and smoke.

When unexposed to fire, the grille allows for the ventilation systems to fulfil their design purpose and freely circulate the flow of air.

TESTS

Standard: UNE EN 1363-1, UNE 1366-3.

Laboratory: CIDEMCO TECNALIA

Test N°: 23548 and 17219-1

MODELS

TECSEL® GRILLES. For ventilation systems	
Vertical surface	
Dimensions (mm)*	Fire rating
250 x 250 x 40	E 120 I 60
250 x 250 x 50	E 120 I 90
250 x 250 x 60	E 120 I 90
400 x 400 x 60	E 120 I 120
400 x 400 x 50	E 120 I 90
400 x 400 x 40	E 120 I 60
600 x 600 x 60	E 120 I 120
600 x 600 x 40	E 120 I 60
600 x 600 x 60 + alu	E 120 I 120
400 x 200 x 40 x 4 grilles	E 120 I 60
300 x 300 x 50 (double)	EI 180

* Other sizes available on request.



APPLICATION AND USE

Tecsel® Grilles are mechanically attached to the supporting constructive element with the appropriate screws, plugs or fittings (these must have at least the same level of fire resistance as the structure onto which they are fixed).

If there are any gaps between the grille and the supporting element, these should be filled with **Tecsel® Intumescent mastic**.

If the ventilation surface is bigger than the grilles dimensions, it is possible to assemble them at an angle, provided we keep the fire resistance and work consistency in the **Tecsel® Grilles** separations.

For a greater ventilation arc than the grille size.

Tecsel® Grilles can be installed on the following structures: walls, doors, floors, ventilation systems, partitions, cable trays.

TECSEL® EI 120 CIRCULAR GRILLES

TESTS

Standard: UNE EN 1363-1:2000.

Laboratory: ENAC

Test N°: 231638

APPLICATION AND USE

Mercor tecsra® completes its range of intumescent ventilation grilles with the **Tecsel® Circular Grilles** new approval, reaching 120 minutes fire resistance with diameters up to 400 mm.



* Check for dimensions.

MODELS

Diameter (mm)	Thickness (mm)	EI Fire Rating
125	40	EI 60
125	50	EI 60
125	60	EI 120
125	40*	EI 120
125	50*	EI 120
125	60*	EI 120
150	40	EI 60
150	50	EI 60
150	60	EI 120
150	40*	EI 120
150	50*	EI 120
150	60*	EI 120
300	40	EI 60
300	50	EI 30
300	60	EI 120
300	40*	EI 120
300	50*	EI 120
300	60*	EI 120
400	40	EI 60
400	50	EI 60
400	60	EI 120
400	40*	EI 120
400	60*	EI 120

* with aluminium cover.



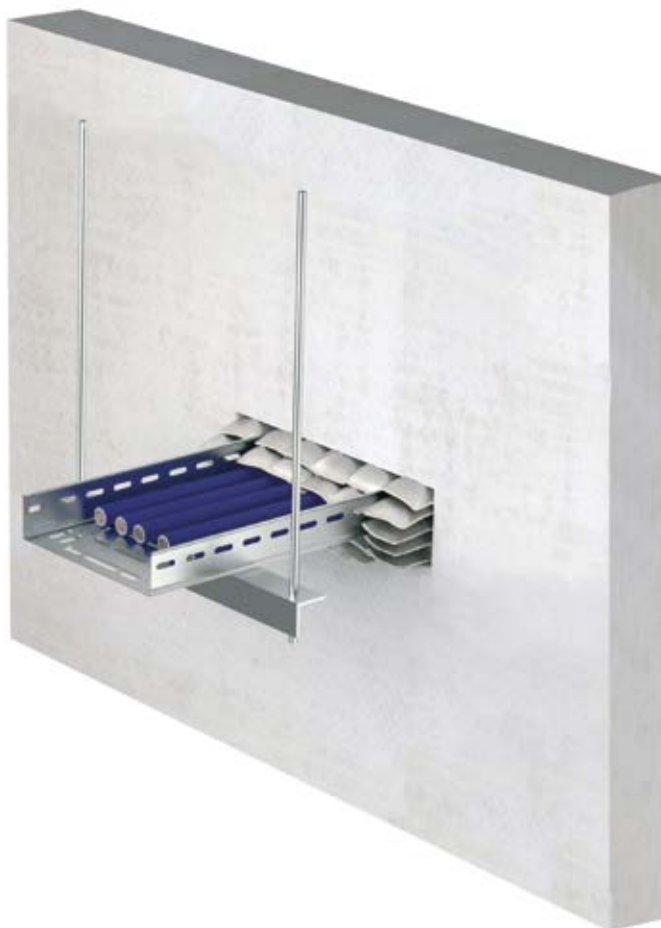
8 - Tecsel® Pillows

EI 120 - EI 180 - EI 240

Tecsel® Pillows are made from intumescent graphite combined with silicates. they are packaged in polyethylene bags covered by mineral fibre fabric.

Tecsel® Pillows are a very versatile solution for sealing up irregular gaps in cable trays or for closing up holes in walls and floors.

The key difference between **Tecsel® Pillows** and other sealing solutions is that they are extremely quick and easy to install. Their maintenance is also very straight forward as they can simply be removed and replaced in a clean and convenient manner.



TESTS

Standard: UNE EN1366-3

Laboratory: CIDEMCO and WARRINGTON.

Test N°:13742 and 349128

DIMENSIONS

DIMENSIONS*	CLASSIFICATION
300 x 100 x 35 mm	EI 240
300 x 150 x 35 mm	EI 240
300 x 200 x 35 mm	EI 240

**Other sizes available under request.*

APPLICATION AND USE

Tecsel® Pillows, are positioned manually to fill any gaps by placing the longest dimensions in parallel to the crossing services.

Check all gaps are filled and the pillows are sufficiently pressed into position. In addition, the filling should be evenly distributed throughout the entire pillow. Additionally, we should make sure the material present inside the **Tecsel® Pillows** is distributed evenly on all the surface.

Tecsel® Pillows are especially useful for uneven installations subjected to frequent modifications. They are very versatile for maximum cleanliness environments, as there is no need of work to assembly them,

If the pillows are not exposed to fire, they can be limitlessly reused.



TECSEL® SOLUTIONS FOR PLASTIC TUBES



Fire protection.



Smoke and gas protection.

Tecsel® Systems

Mercor tectesa® offers a range of solutions that prevent the spread of fire, gases and smoke through plastic pipes located in walls, partitions or slabs; providing integrity and insulation.

In event of fire, plastic pipes begin to deform at around 105°C, at this point the intumescent sealant begins to expand, by sealing the pipe penetration.

TESTS

Tecsel® Solutions for plastic pipes have been tested according to the European standard **UNE EN 1366-3** and the British standard **BS 476 part 20**.



9 - MCR multicollar

EI 120

Fire **mcr multicollars** and **intumescent bands** have been designed to protect plastic pipeline from penetrations on the EI 120 vertical and horizontal partition walls. Collars and wrappers are classified as EI 120 U/C.

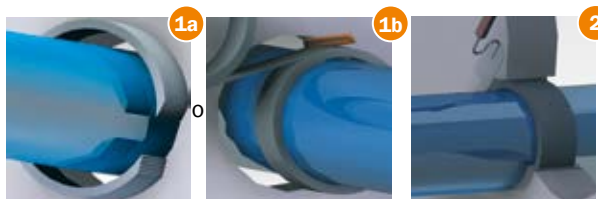
The wrapper is an integral part of the **mcr Multicollar** and also, an independent product (intumescent mcr Band) when assembled without the steel band.





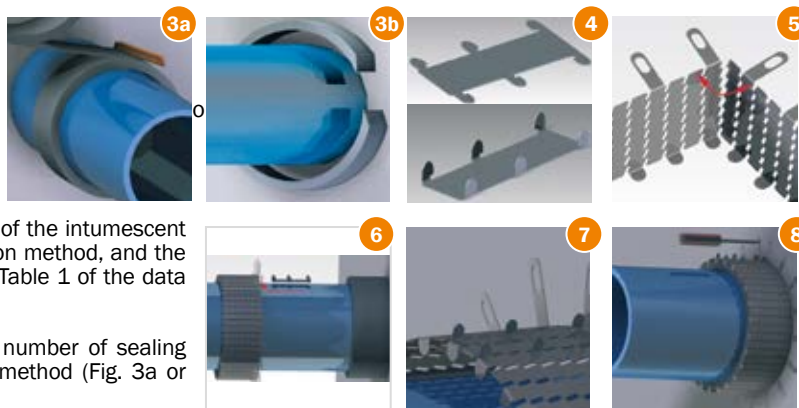
INSTALLATION OF THE MCR INTUMESCENT BAND

- 1 Installation method and external diameter of the pipe, in which the intumescent band must be installed, are detailed on Table 1 of the data sheet, check.
- 2 Read the gap diameter of the partition wall and the number of intumescent sealing rolls on the Table 1 of the data sheet.
- 3 Prepare the gap on the partition wall with the diameter indicated on Table 1 of the data sheet.
- 4 Wrap the pipe with the exact number of sealing rolls, using the most suitable method (Fig. 1a or 1b).
- 5 Place the material of the intumescent rolls inside the prepared gap.
- 6 Fill the remaining space of the gap with mortar (Fig. 2).
- 7 Put the completion date of protection on the 2 adhesive labels, according to the current regulations.
- 8 Place the labels in the protected installation, on both sides of the partition wall (on the wall or ceiling).



INSTALLATION OF THE MCR MULTICOLLAR

- 1 Installation method and external diameter of the pipe, in which the intumescent band must be installed, are detailed on Table 1 of the data sheet, check.
- 2 Number of rolls or total length of the intumescent sealing, for a specific installation method, and the pipe diameter can be read on Table 1 of the data sheet.
- 3 Wrap the pipe with the exact number of sealing rolls, using the most suitable method (Fig. 3a or 3b).
- 4 Press the sealing against the wall.
- 5 Bend the hooks for the fixation pieces (Fig. 4).
- 6 Read the number of units or total length of the steel band corresponding to the external diameter of the collar for the given installation method and external diameter of the pipe.
- 7 Measure the right length with a tape measure.
- 8 Bend the band during the drilling, break and strip off the needed length of the steel belt (Fig. 5).
- 9 Wrap the band around the pipe (Fig. 6).
- 10 Fix the belt inserting the hooks of the fixation pieces on the steel belt drillings (Fig. 7).
- 11 Slide the steel belt over the wrapped intumescent material.
- 12 Leave a gap between the steel belt and the intumescent sealing.
- 13 Fix the collar using structural connectors (such as M6 anchorages, M6, screws). The number of connectors must match the number of fixations elements specified on Table 1 (Fig. 8).
- 14 Put the completion date of protection on the 2 adhesive labels, according to the current regulations.



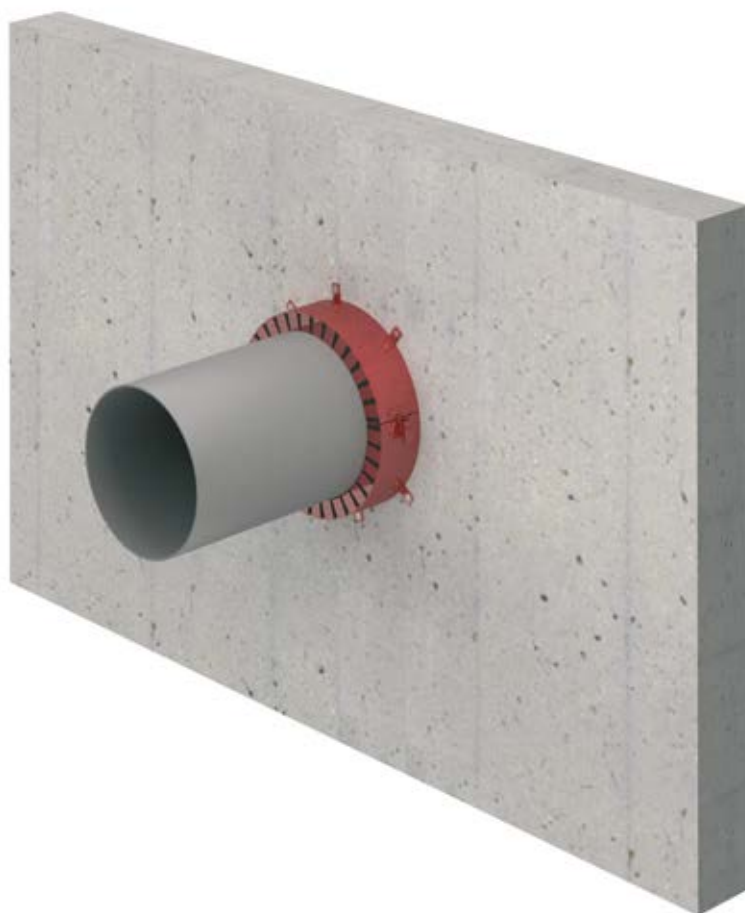
A close-up photograph of a red, flexible fire protection collar. The collar has a series of rectangular, raised segments along its length, which are likely the intumescent graphite mentioned in the text. The background is dark, making the red collar stand out.

10 - Tecsel® Collar

EI 120 - EI 180 - EI 240

Tecsel® Collars are made of a metal frame with intumescent graphite attached.

The fire-protection mechanism is the same as **Tecsel® Multicollar**. The intumescent graphite band expands when exposed to fire, sealing the gap occupied by the plastic tube and preventing the transfer of smoke and flames between different fire compartment..



APPLICATION AND USE

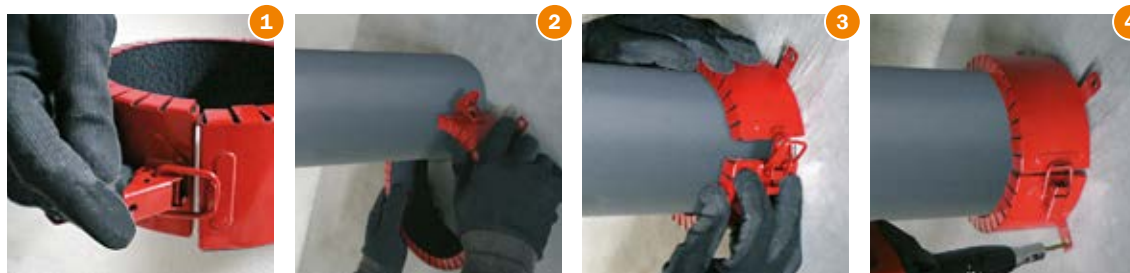
Tecsel® Collar is closed by fastening the metal clip. The **Tecsel® Collar** is attached to the supporting structure by means of various holes and the corresponding screws or rivets.

- 1 Check the measurements of the pipe and open the **Tecsel® Collar**.
- 2 Place **Tecsel® Collar** as close as possible to the supporting structure.
- 3 Use the metal tab to adjust and to close the collar.
- 4 Screw the collar to the supporting structure using the appropriate fasteners.

MODELS

TECSEL® COLLAR	
Vertical and horizontal surface	
Diameter (mm)*	Classification
82	EI 180
110	EI 240
160	EI 180
200	EI 240
250	EI 240
315	EI 240

**Other sizes available on request.*



11 - Tecsel® Bands

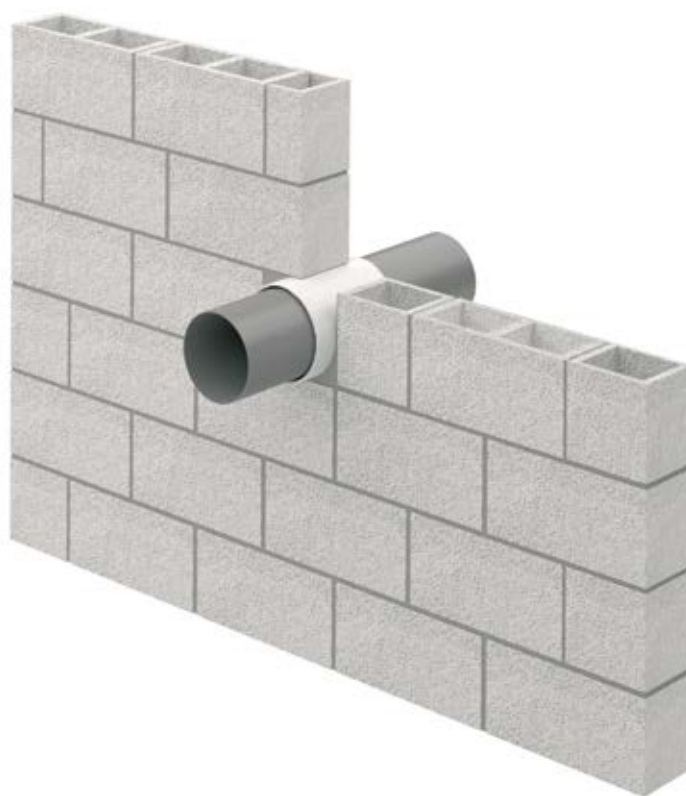
EI 120

Tecsel® Bands are flexible sheets of intumescent graphite wrapped in a polyethylene cover.

Tecsel® Bands are the most efficient solution when the pipeline runs through uneven supports or the fixation is complex.

The ease and simplicity of their installation lies in their versatility, allowing **Tecsel® Bands** to adapt perfectly to any situation that may arise during regular operations.





APPLICATION AND USE

Tecsel® Bands are placed around the pipe within the support work. The final adjustment of the band is made with the adhesive tape present on the outer surface

MODELS

MODEL	DIMENSIONS*	CLASSIFICATION
Tecsel® Band	110 mm	EI 120
Tecsel® Band	125 mm	EI 120
Tecsel® Band	160 mm	EI 120

* Other sizes available on request.

















- 1 Plastic pipe running through various fire compartments.
- 2 Place the **Tecsel® Bands** around the pipe and check the pipe size.
- 3 Fit the band inside the supporting structure and secure in place with the adhesive tape.
- 4 Place the final cover over the penetration in the supporting structure and the **Tecsel® Band** remains inside the structure.



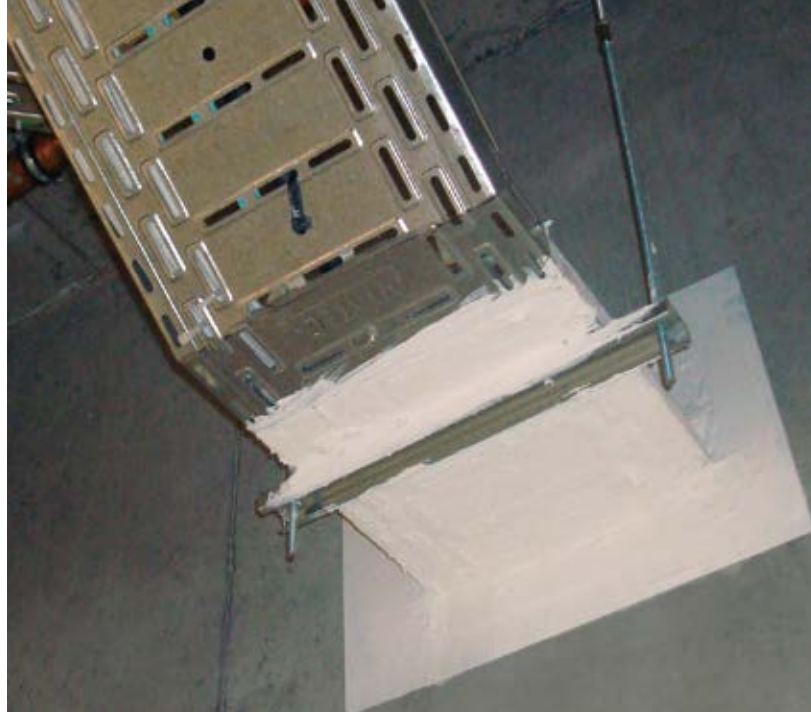
SUMMARY OF SOLUTIONS



PRODUCTS	DESCRIPTION
1. Tecbor® Joint Paste ready to use 	Tecbor® Joint paste ready to use is an ablative coating containing an aqueous dispersion of ablating polymers that produce an endothermic reaction in the event of a fire, thereby preventing the spread of flames and limiting the propagation of fire and smoke.
1.1. Cable and penetration seals 	The combination of 145 kg/m ³ of rock wool with Tecbor® Joint Paste creates a comprehensive sealing system for all types of installations.
1.2. Cable tray protection 	The application of Tecbor® Joint Paste to metallic trays and to the cables themselves allows for the installation to function correctly, ensuring that electricity is continuously supplied and preventing short circuiting and shunts. It also serves to reduce propagation through the electrical cables.
2. Tecsel® intumescent mastic 	Tecsel® intumescent mastic is an intumescent sealant designed especially for joints in buildings door frames and small openings in fire compartments.
3. Tecsel® self-levelling silicone 	Tecsel® self-levelling silicone is a fire-resistant sealant based on self-levelling and neutral curing silicone. It is designed for use on expansion joints on horizontal surfaces that are designed to bear substantial movement.
4. Tecsel® Foam 	Tecsel® Foam is a self-expanding, single-component polyurethane that is highly fire resistant.
5. Tecsel® Flexible Sealant 	Tecsel® Flexible Sealant is a combination of mineral fibres and intumescent graphite, with a protective plastic coating. This product is especially designed for expansion joints.

PRODUCTS	DESCRIPTION
<p>6. Tecsel® Lighting Cover and Tecsel® Socket Cover</p> 	<p>Both solutions are a combination of graphite and mineral wool that swells when exposed to flames, sealing any gaps in the installation and therefore preventing the transfer of fire and flames to the adjacent fire sectors..</p>
<p>7. Tecsel® Grilles</p> 	<p>Tecsel® Grilles are PVC-encapsulated sheets of palusol. Palusol is made from sodium silicate hydrate, a small amount of organic material and is reinforced with fibre glass. Both faces have an epoxy resin layer that protects the intermediate layer.</p>
<p>7.1. Tecsel® Circular Grilles</p> 	<p>Mercor tecresa® completes its range of intumescent ventilation grilles with the Tecsel® Circular Grilles new approval, reaching 120 minutes fire resistance with diameters up to 400 mm</p>
<p>8. Tecsel® Pillows</p> 	<p>Tecsel® Pillows contain a combination of intumescent graphite and silicates, which is packaged in polyethylene cases coated with mineral fibre fabrics.</p>
<p>9. mcr Multicollar</p> 	<p>Mcr fire multicollars and intumescent bands have been designed to protect plastic pipeline from penetrations on the EI120 vertical and horizontal partition walls.</p>
<p>10. Tecsel® Collar</p> 	<p>The Tecsel® Collar consists of a metal frame inside which sheets of intumescent graphite are attached.</p>
<p>11. Tecsel® Bands</p> 	<p>Tecsel® Bands are flexible sheets of intumescent graphite wrapped in a polyethylene cover.</p>





REFERENCE WORK

- BANCO POPULAR NEW HEADQUARTERS, MADRID.
- TELEFÓNICA FOUNDATION, MADRID.
- FOSTER TOWER, MADRID.
- PLATEA MADRID, MADRID.
- CPD REPSOL TRES CANTOS, MADRID.
- SANTIAGO DE COMPOSTELA AIRPORT - LAVACOLLA.
- AVDA. DE AMÉRICA INTERCHANGE STATION, MADRID.
- EMT SANCHINARRO BUS DEPOT, MADRID.
- ANDORRA THERMAL POWER STATION IN TERUEL.
- PEREZ LLORCA BUILDING Pº CASTELLANA, 50, MADRID.
- BANKIA, GABRIEL GARCÍA MÁRQUEZ BUILDING LAS ROZAS, MADRID.
- BAHÍA SUR SHOPPING CENTRE, SAN FERNANDO, CÁDIZ.
- EUROPEAN UNIVERSITY OF MADRID, ALCOBENDAS, MADRID.
- VITHAS NUESTRA SEÑORA DE LA SALUD HOSPITAL, GRANADA.
- PUERTA DE HIERRO UNIVERSITY HOSPITAL, MAJADAHONDA, MADRID.
- INFANTA ELENA UNIVERSITY HOSPITAL, VALDEMORO, MADRID.
- VIRGEN DE LA PEÑA GENERAL HOSPITAL OF FUERTEVENTURA, PUERTO DEL ROSARIO, LAS PALMAS.
- MANISES HOSPITAL, VALENCIA.
- COREYSA CLINIC, CIUDAD REAL.
- CARLOS III UNIVERSITY RESIDENCE IN GETAFE, MADRID.
- REAL MADRID BASKET TRAINING FACILITIES, VALDEBEBAS, MADRID.
- GRAN VÍA CAPITAL, MADRID.
- CASBEGA LOGISTICS PLATFORM, LEGANÉS, MADRID.
- GÉNESIS BUILDING AVDA. DE BURGOS, 8, MADRID.
- LOCAL POLICE HEADQUARTERS IN BOADILLA DEL MONTE, MADRID.
- ARCHAEOLOGICAL MUSEUM OF MADRID.
- INTEGRATED CENTRE HIPERCOR COSLADA, MADRID.
- EL CORTE INGLÉS OPPORTUNITY CENTRE, ALCORCÓN, MADRID.
- LA RABIDA REFINERY, PALOS DE LA FRONTERA, HUELVA.
- GIBRALTAR REFINERY.
- REPSOL PUERTOLLANO REFINERY, CIUDAD REAL.
- REPSOL REFINERY, A CORUÑA.
- CEPESA FACTORY IN ERTISA, HUELVA.
- RABAT JEWELLERY Pº DE GRACIA, BARCELONA.





Reference work





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