Akfix®

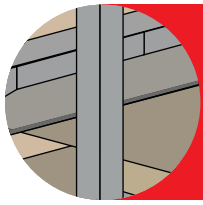
MASTER OF SOLUTIONS

Fire Rated Products

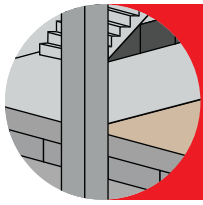
Creates Permanent Solutions

Akfix® IMPORTANT ASPECTS OF

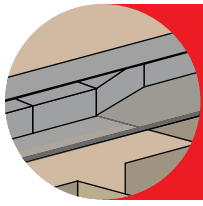
Fire-resistant intumescent coatings - structural steel **1**



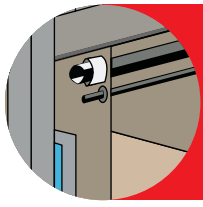
Fire-resistant sprayed coatings - structural steel **2**



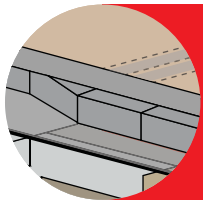
Fire-resistant boards - structural steel **3**



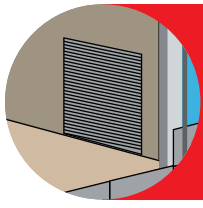
Fire-rated/smoke control extract ductwork **4**



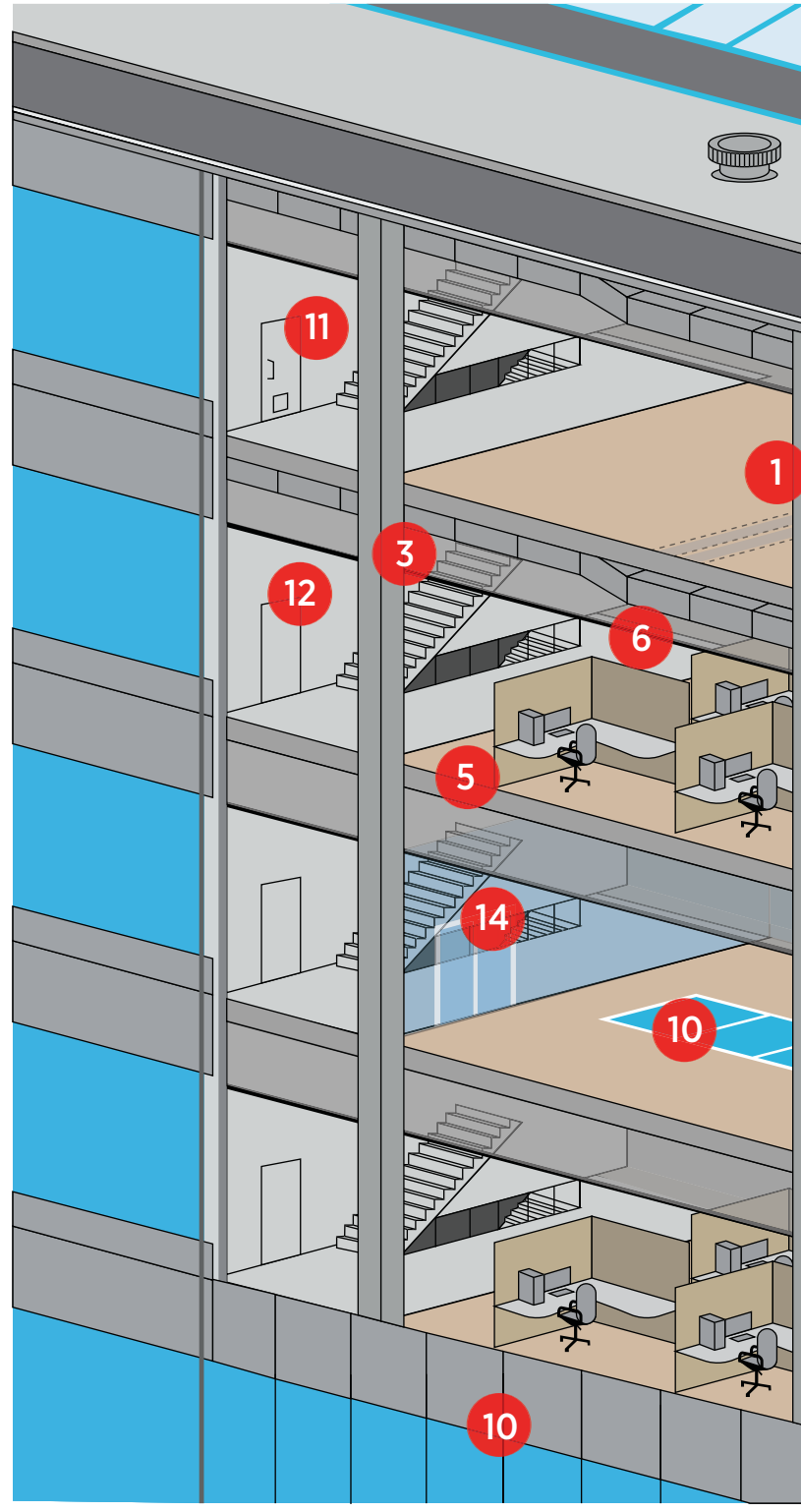
Fire-stopping penetration seals **5**



Fire-rated dampers smoke control **6**



Fire-rated industrial doors/ shutters **7**

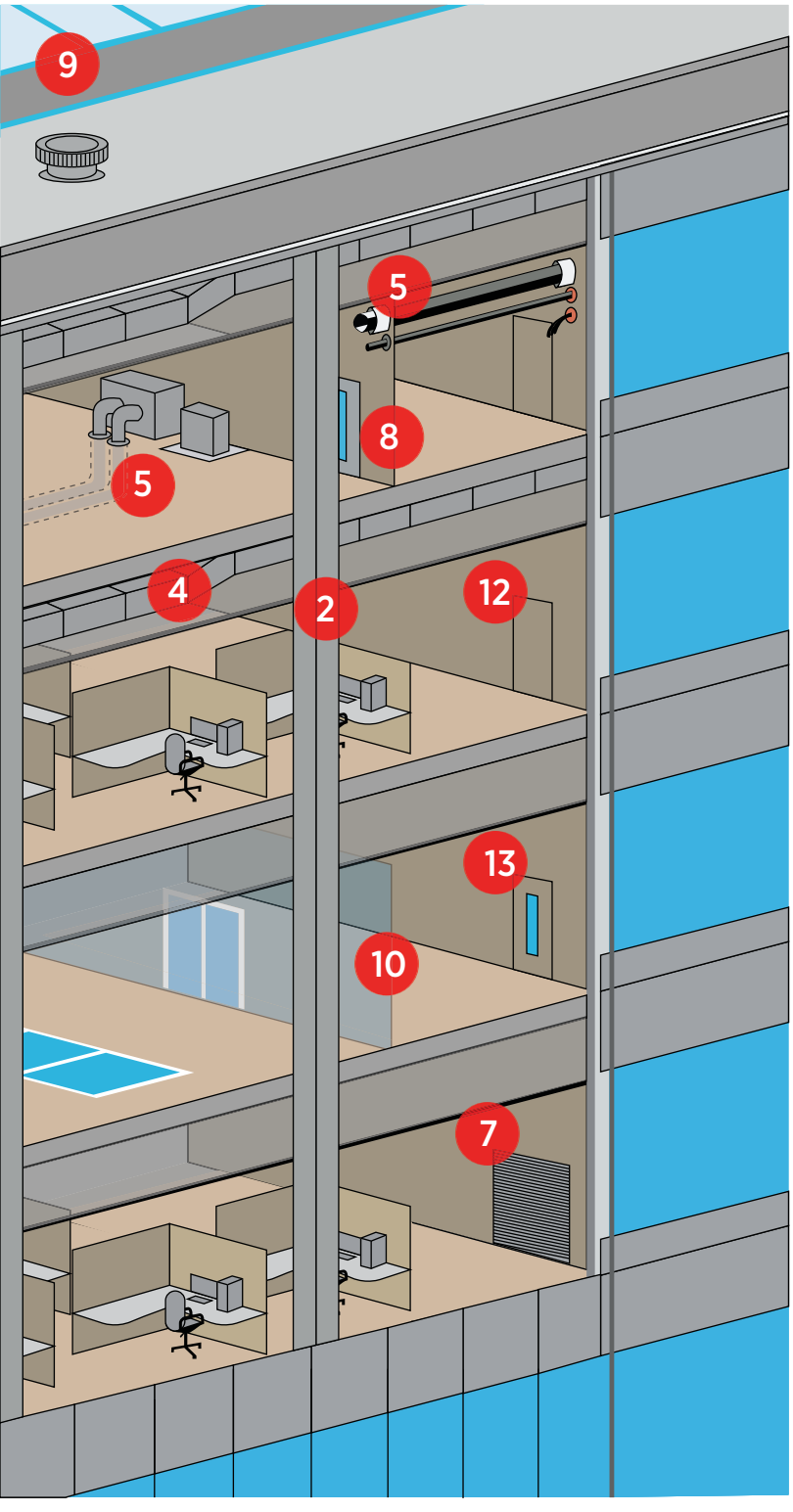


To minimize the loss of life and property in case of fire:

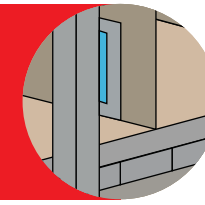
- Detection systems (Smoke detectors)
- Active fire protection systems (sprinkler, fire extinguisher etc.)
- Passive fire protection systems(Fire doors, ventilation ducts, service installations etc.) must be used.

Today a great importance is given to the quality of these systems and it is a necessity to meet various European or national norms.

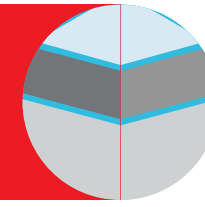
PASSIVE PROTECTION SYSTEMS



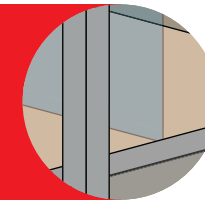
8 Fire-rated partitions



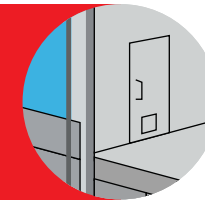
9 Fire-resistant roof glazing



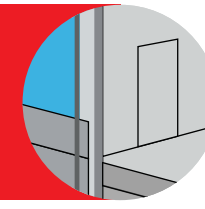
10 Fire resistant glass walls/ floors/facades



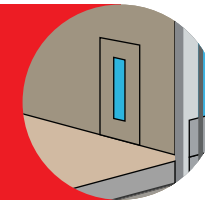
11 Fire-resistant building hardware



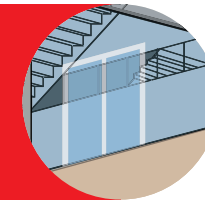
12 Fire-resistant and smoke control doors



13 Fire-resistant glazed doors



14 Fire-resistant glass doors



Due to our product range, we are targeting passive fire protection systems (passive fire stop systems).

Akfix foams and sealants, which are a major component of connection joints in these systems, have been tested according to the European standard EN 1366-4 and proven to be superior in performance.

It is legally impossible to use a product that does not have one of these and other similar fire resistance standards (by product type and area of use) in a system called as a passive fire protection system.

FIRE RETARDANT MORE THAN 4 HOURS

A+ INDOOR AIR QUALITY

25% MOVEMENT CAPABILITY

FIRE RATED PU SEALANT

A one-component, modular polyurethane sealant that provides all the advantages of an ordinary polyurethane sealant, as well as a high level of fire resistance.

PROPERTIES

- According to EN 1366-4, provides fire resistance more than 240 minutes in certain conditions without using backfilling materials.
- M2 Fire Rating according to NF P 92-501 radiation test.
- 25% movement capability
- No surface tackiness after the full cure,
- No dirt,
- No shrinkage,
- Does not form bubble,
- Thixotropic,
- Paintable.

Linear Gap Sealing Of Fire Rated Wall-Partitions

APPLICATION AREAS

It is used to provide passive fire resistance in many structures and systems requiring up to 25% mobility, included but not limited to following;

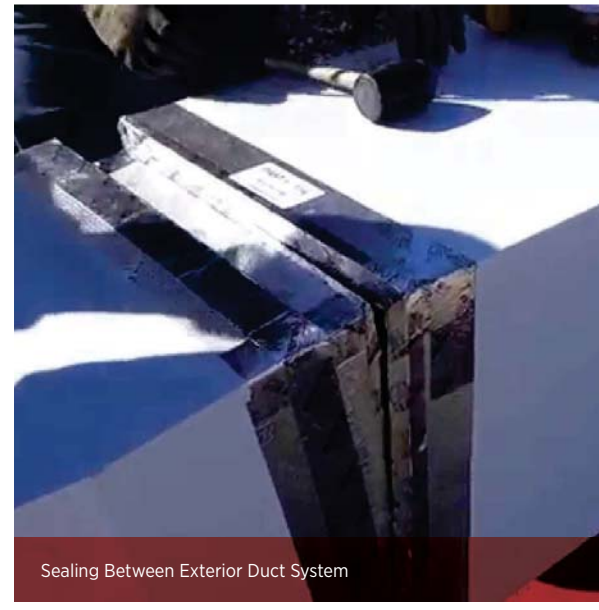
- In construction sector; sealing the joints between building elements,
- At joints of prefabricated building elements,
- Sealing and bonding of ventilation ducts,
- In buildings, it is used to close the joints between precast concrete blocks.

TECHNICAL FEATURES

BEFORE CURING		
Basis	: Polyurethane	
Consistency	: Thixotropic	
Curing Mechanism	: Moisture Curing	
Density	: 1.20-1,25g/ml	
Tack free time	: 30-60 min.	(23°C and 50% R.H)
Curing Rate	: Min. 2,5 mm/day	(23°C and 50% R.H)
Sagging	: 0 mm	(EN ISO 7390)
Temperature Resistance	: -40°C to +90°C	
Application Temperature	: +5°C to +40°C	
AFTER CURING		
Hardness Shore A	: 35-40 After 28 days	(ASTM C661)
Paintibility	: Yes *	
Elastic Recovery	:≥ 70%	(ISO 7389)
Glass-Glass		
Elongation at break	: ≥ 200% (ISO8339)	
E100 Modulus (23 °C)	: 0.35-0.40 N/mm²	(ISO8339)
E100 Modulus (-20 °C)	:≤ 0,60 N/mm²	(ISO8339)
DUMBLE TEST		
Elongation at break	: ≥%600	(ASTM D412)
Tensile Strength	: 1.5-2.0 N/mm²	(ASTM D412)

Fire Rated Stairs: Sealing Expansion Joints

Sealing Between The Internal Precast Wall Panels And Ceiling



Sealing Between Exterior Duct System

Test Results –Efectis Era Global; EN 1366-4:2010

Wall Thickness	Joint Measurements	Filling Material	Application	Fire Resistance/ Minutes
200mm	Width: 11 mm Depth: 10+10 mm	None	Double Sided	240 minutes Fire Classification: EI 240
200mm	Width: 21 mm Depth: 10+10 mm	Ceramic Wool	Double Sided	240 minutes Fire Classification: EI 240
100mm	Width: 11 mm Depth: 10+10 mm	None	Double Sided	196 minutes Fire Classification: EI 180
100mm	Width: 21 mm Depth: 10+10 mm	Ceramic Wool	Double Sided	186 minutes Fire Classification: EI 180

EI x: Integrity and insulation are not compromised for at least x minutes.

PACKAGE

Stock Code	Type	Volume	Box
AA803	Black	300 ml	12
AA843	Black	400 ml	12
AA863	Black	600 ml	12
AA846	Grey	400 ml	12
AA866	Grey	600 ml	12
AA833	Black	310 ml	12
AA836	Grey	310 ml	12

CERTIFICATES

ÉMISSIONS DANS L'AIR INTÉRIEUR A+ A+ A B C

M2

Fire Class

FIRE RETARDANT MORE THAN 240 mins.

A+ INDOOR AIR QUALITY

INTUMESCENT

AC607

FIRE STOP ACRYLIC SEALANT

A single component water based fire rated acrylic sealant ideal for sealing joints to prevent the passage of flammable gases and toxic smoke in compartment walls and floors. Due to its intumescent properties, it expands volumetrically by releasing water vapor exceeding 120 °C temperatures to reduce heat transfer.

PROPERTIES

- According to EN 1366-4, provides fire resistance more than 240 minutes in certain conditions without using backfilling materials.
- M1 Fire Rating according to NF P 92-501 radiation test.
- Good unprimed adhesion to most common construction substrates.
- Remains flexible.
- Paintable.
- Non-slump formula.

Fire-Stopping Penetration Seals

APPLICATION AREAS

As stated below, it can be used to provide passive fire resistance in multi structures and systems that can move up to 15%;

- At the expansion points of walls and floors,
- For xixing and in between joints of panels and similar structures,
- For the isolation of wood, steel and PVC,
- Mounting decorative materials,
- In steel ducts, ducting, cables and cable ducts.

Penetration Seal Combined With Industrial Shutter

TECHNICAL FEATURES

Basis	: Acrylic Dispersion	
Consistency	: Smooth paste	
pH	: 7.5-9	
Specific gravity	: 1,58 ± 0,03 gr/cm^3	(ASTM D 792)
Tack-Free time	: 15-30 min (23°C and 50% R.H)	(ASTM C 679-03)
Curing Rate (mm/day)	: Min.2 mm/day	(23°C and 50% R.H)
Shore A hardness	: 40 ± 5 Shore A	
Elongation	: > 100%	(ASTM D 412)
Tensile strength	: ≥ 0,4 N/mm^2	(ASTM D 412)
Application Temperature	: +5°C to +40°C	
Volume shrinkage	: %10-15	(ASTM D 412)

Interior Wall: Fire-Stopping Solution

Various Penetration Seal Systems

Test Results –Efectis Era Global; EN 1366-4:2010

Wall Thickness	Joint Measurements	Filling Material	Application	Fire Resistance/ Minutes
200mm	Width: 10 mm Depth: 20+20 mm	None	Double Sided	240 minutes Fire Classification: EI 240
200mm	Width: 20 mm Depth: 20+20 mm	None	Double Sided	240 minutes Fire Classification: EI 240
100mm	Width: 20 mm Depth: 20+20 mm	None	Double Sided	229 minutes* Fire Classification: EI 240
100mm	Width: 10 mm Depth: 20+20 mm	None	Double Sided	229 minutes* Fire Classification: EI 240

EI x: Integrity and insulation are not compromised for at least x minutes.

*Test has been terminated for the safety concerns.

PACKAGE

Stock Code	Type	Volume	Box
AA607.5	White	310ml	12
AA607.4	White	400 ml	12
AA607.3	White	600 ml	12
AA701	White	Br. 550 g.	12
AA761	White	600 ml	12

CERTIFICATES

ÉMISSIONS DANS L'AIR INTÉRIEUR A+ A+ A B C

M1

Fire Class

FLEXIBLE & DURABLE

GAS & WATER TIGHT

SHOCK ABSORBING

N920

INTUMESCENT FIRE RATED NEUTRAL SILICONE SEALANT

A graphite containing one-component neutral grade intumescent silicone sealant designed to protect cable entries by forming a gas and watertight seal. Product cures upon exposure to atmospheric humidity. It expands at high temperatures to prevent the passage of smoke and flames.

PROPERTIES

- Flexible and durable
- Gas and Water tight
- Shows Fire resistance properties.
- Resistant against Water, Alkaline, Chemical agents.
- Non corrosive.
- Solvent free.
- Shock absorbing.
- Quick and easy installation.

Intumescent Cable-Duct-Seal Systems

APPLICATION AREAS

- Combustible and non combustible pipes
- Cables (single cables or bunches of cables)
- Seals all know materials; PVC & PE sheathed cables etc.
- Suitable for any shaped duct
- Suitable for all common building materials.

TECHNICAL FEATURES

Basis	: Neutral Silicone	
Density	: 1,25 ±0,03gr/cm³	(ASTM D 792)
Flow	: 0 mm	(ISO 7390)
Colour	: red-brown-black	
Skin over time	: ± 20 minutes 23°C / 55% R.H.	
Curing	: Min. 3 mm/24h	
Hardness	: 30-35 shore A	
Elongation	: > 100%	(ISO 7389)
Tensile strength	: 1± 0,25 N/mm²	(ISO 8339)
Operating temperature	: +5°C to +40°C	
Temperature resistance	: -40°C to +120°C	

Combustible Pipe Sealing

Fire Barrier Around Exterior Duct

Combustible Pipe Sealing

PACKAGE

Stock Code	Type	Volume	Box
SA093	Black	310 ml	12
SA096	Grey	310 ml	12
SA095	Red	310 ml	12

Reaction to fire classification
according to EN 13501-1

B-s1,d0

Hvac Penetration Cable-Pipe Sealing

FIRE RETARDANT

ABSORBS MOVEMENTS 25 %

WATER, WEATHER & UV RESISTANT

140F

FIRE RATED SILICONE SEALANT

A one part, low modulus, neutral cure, halogen free product. It is suitable for the sealing of linear construction joints and around pipe penetrations It is also ideal for the weathersealing of curtain walling, building facades and expansion joints in fire rated walls.

PROPERTIES

- Flexible and durable
- Classified as B-s1,d0 according to EN 13501-1:2007+A1:2009
- Water, weather and UV resistant.
- Resistant against Water, Alkaline, Chemical agents.
- Non corrosive.
- Solvent free.
- Air tight sealing.
- Quick and easy installation.

Fire Resistant Curtain Wall Systems

APPLICATION AREAS

- Fire resistant sealing of connection and expansion joints in constructions
- All building and glazing joints which require a fire rating.
- Suitable for all common building materials.

TECHNICAL FEATURES

Basis	: Silicone Polymer (Oxime)	
Density	: 1,20 ± 0,03 g / cm3	(ASTM D 792)
Sagging	: 0 mm	(ISO 7390)
Skin over time	: 10 ± 5 dakika	(23°C, 50% R.H.)
Curing Rate	: Min. 3 mm/ 24 sa	(23°C, 50% R.H.)
Hardness	: 30 - 35 shore A	
Elongation at break	: ≥ 100%	(ISO 7389)
Tensile Strength	: 1,5-2,0 N/mm2	(ISO 8339)
Application Temperature	: +5°C to +40°C	
Heat Resistance	: -60 °C to +180°C	

Fire Door Interior Sealing

Fire Rated Glass Door

Fire Door Frame Sealing

PACKAGE

Stock Code	Type	Volume	Box
SAF12	White	310 ml	12
SAF13	White	310 ml	12
SAF16	White	310 ml	12
SAF62	White	600 ml	12
SAF63	White	600 ml	12
SAF66	White	600 ml	12

Fire Rated Board

FIRE RETARDANT UP TO 217 MIN

EFFICIENT SEAL AGAINST SMOKE AND GAS

EXCELLENT ADHESION & FILLING CAPACITY

820/820P

B1 FIRE RATED PU FOAM STRAW / GUN

A moisture curing, one-component, ozone friendly, ready to use polyurethane foam. It is suitable for use in passive fire protection systems as it meets with various fire resistance protocols.

PROPERTIES

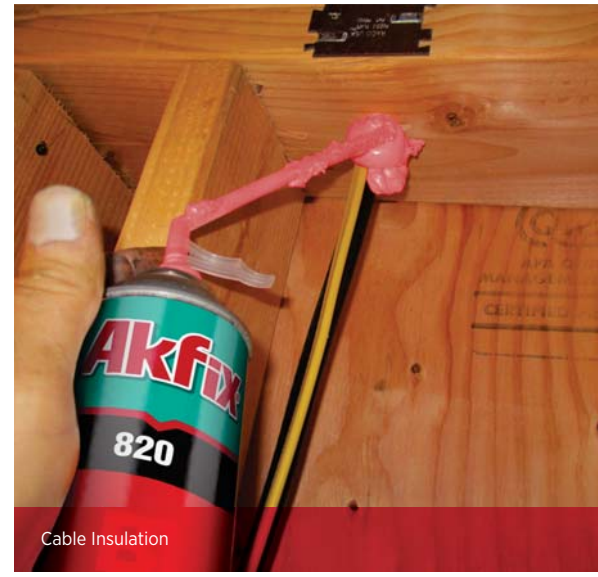
- According to EN 1366-4, provides fire resistance up to 217 minutes in certain conditions without using backfilling materials,
- Provides efficient isolation against gas and smoke,
- CFC and HCFC free,
- Excellent adhesion and filling properties,
- Efficiency up to 45L with Straw type (820) and 55L with Gun type (820P) depending on moisture and temperature,
- No Shrinkage,
- After cured, it can be painted, cut, trimmed.

APPLICATION AREAS

It is used to provide passive fire resistance in many structures and systems, especially those mentioned below;

- Manufacture and installation of fire doors,
- Gaps that are critical to the structure during the fire; filling and sealing of large cracks and holes,
- In the insulation of cables and plugs which will be affected first by fire,
- Bonding of fire-resistant exterior insulation materials.

Gap Filling In Duct And Cable Penetration Systems



Cable Insulation

TECHNICAL FEATURES

820

Basis	: Polyurethane Prepolymer	
Curing System	: Moisture cure	
Specific Gravity	: 22±3 Kg/cm^3	(ASTM D1622)
Tack-Free Time (1 cm width)	: 7±3 min	(ASTM C1620)
Cutting Time (1cm width)	: 30-45 min	(ASTM C1620)
Cure-Time	: 24 hours	
Foam Colour	: RED	
Yield Volumetric	: 35-45L	(ASTM C1536)
Post Expansion	: 200-250 %	
Shrinkage	: <5%	
Fire Class of the Cured Foam	: B1	(DIN 4102)
Thermal Conductivity	: 0,036 W/m.k (at 20°C)	(DIN 52612)
Compression Strength	: 0,03 MPa	(DIN 53421)
Water Absorption	: Max. 1 vol%	(DIN 53428)
Temperature Resistance	: -40°C to +90°C	
Application Temperature	: +5°C to +30°C	
Can temperature	: +5°C to +30°C	

820P

Basis	: Polyurethane Prepolymer	
Curing System	: Moisture cure	
Specific Gravity	: 19±3 Kg/cm3	(ASTM D1622)
Tack-Free Time (1 cm width)	: 7±3 min	(ASTM C1620)
Cutting Time (1cm width)	: 30-45 min	(ASTM C1620)
Cure-Time	: 24 hours	
Foam Colour	: RED	
Yield Volumetric	: 45-55L	(ASTM C1536)
Post Expansion	: up to 30%	
Shrinkage	: <5%	
Fire Class of the Cured Foam	: B1	(DIN 4102)
Thermal Conductivity	: 0,036 W/m.k (at 20°C)	(DIN 52612)
Compression Strength	: 0,03 MPa	(DIN 53421)
Water Absorption	: Max. 1 vol%	(DIN 53428)
Temperature Resistance	: -40°C to +90°C	
Application Temperature	: +5°C to +30°C	
Can temperature	: +5°C to +30°C	

Test Results –Efectis Era Global; EN 1366-4:2010

Wall Thickness	Joint Measurements	Filling Material	Fire Resistance/ Minutes
200mm	Width: 11 mm Depth: 200 mm	None	217 minutes Fire Classification: EI 180
200mm	Width: 31 mm Depth: 200 mm	None	147 minutes Fire Classification: EI 120
100mm	Width: 21 mm Depth: 100 mm	None	64 minutes Fire Classification: EI 60
100mm	Width: 11 mm Depth: 100 mm	None	80 minutes Fire Classification: EI 60

PACKAGE

Stock Code	Type	Volume	Box
(820P) FA025	Summer +5	Gw. 850 g.	12
(820) FA015	Summer +5	Gw. 850 g.	12

CERTIFICATES

ÉMISSIONS DANS L'AIR INTÉRIEUR A+ A+ A B C

B1 Fire Class

CLASSIFIED C UL US

RATED B2 ACCORDING TO DIN 4102

EXCELLENT ADHESION TO MOST BUILDING MATERIALS

VERY GOOD FILLING CAPACITY

840/840P

B2 FIRE RATED PU FOAM STRAW / GUN

A self-extinguishable multi-purpose polyurethane foam which provides moderate fire safety. It is designed for easy dispensing through the straw adapter included to each can.

PROPERTIES

- Provides moderate fire safety,
- High metric yield and reusability,
- Excellent adhesion & filling capacity,
- Economical consumption thanks to precise application,
- Conforms to fire class B2 according to DIN 4102-1,
- Efficiency up to 45L with Straw type (840) and 55L with Gun type (840P) depending on moisture and temperature,
- Mould-proof, water-proof and over paintable.

Insulation Of Fire-Door Frames

APPLICATION AREAS

- Insulating electrical outlets and water pipes
- Fixing and insulating of door and window frames.
- Filling and sealing of gaps, joints and cavities.
- Filling of penetrations in walls.

TECHNICAL FEATURES

840

Basis	: Polyurethane Prepolymer	
Curing System	: Moisture cure	
Specific Gravity	: 22±3 Kg/ cm^3	(ASTM D1622)
Tack-Free Time (1 cm width)	: 6±2 min	(ASTM C1620)
Cutting Time (1cm width)	: 20-45 min	(ASTM C1620)
Cure-Time	: 24 hours	
Foam Colour	: Light red	
Yield	: 30-45 L	(ASTM C1536)
Fire Class of the Cured Foam	: B2	(DIN 4102)
Thermal Conductivity	: 0,036 W/m.k (at 20°C)	(DIN 52612)
Compression Strength	: 0,03 MPa	(DIN 53421)
Water Absorption	: max. 1 vol%	(DIN 53428)
Can Temperature	: min.5°C max. +30°C	
Temperature Resistance	: -40°C to +90°C	
Application Temperature	: +5°C to +30°C	

840P

Basis	: Polyurethane Prepolymer	
Curing System	: Moisture cure	
Specific Gravity	: 19±3 Kg/ cm^3	(ASTM D1622)
Tack-Free Time (1 cm width)	: 6±2 min	(ASTM C1620)
Cutting Time (1cm width)	: 20-45 min	(ASTM C1620)
Cure-Time	: 24 hours	
Foam Colour	: Light red	
Yield	: 40-55 L	(ASTM C1536)
Fire Class of the Cured Foam	: B2	(DIN 4102)
Thermal Conductivity	: 0,036 W/m.k (at 20°C)	(DIN 52612)
Compression Strength	: 0,03 MPa	(DIN 53421)
Water Absorption	: max. 1 vol%	(DIN 53428)
Can Temperature	: min.5°C max. +30°C	
Temperature Resistance	: -40°C to +90°C	
Application Temperature	: +5°C to +30°C	

Test No.		1	2	3	4	5	6	7	8
Exposure conditions*		F		K					
Thickness	mm	10	30	10	30				
Ignition	s	immediately							
Max. flame height									
within 20 s	cm	11	11	9	12	12	11	12	12
reached after	s	6	6	9	5	4	7	2	8
Measuring-mark reached after	s	-	-	-	-	-	-	-	-
Flames extinguished after:	s	15	15	15	15	15	15	15	15
Smoke development:		very high							
Filter paper ignited after:	s	-	-	-	-	-	-	-	-

* K = edge exposure; F = surface exposure

Gap Filling In Combustion Pipes

Insulation Of Gas Pipes

PACKAGE

Stock Code	Type	Volume	Box
(840) SAF12	Summer +5	Gw. 850 g.	12
(840P) SAF13	Summer +5	Gw. 850 g.	12

CERTIFICATES

B2 Fire Class

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MASTER OF SOLUTIONS

Fire Rated
Products

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