Wedge

Intumescent Fire Seals

- High Fire Protection Performance
- Fire Resistance 30 to 240 Minutes
- Lower activation temperature
- Free from Rubber, Smoke, Halogens
- High Self Adhesion Strength

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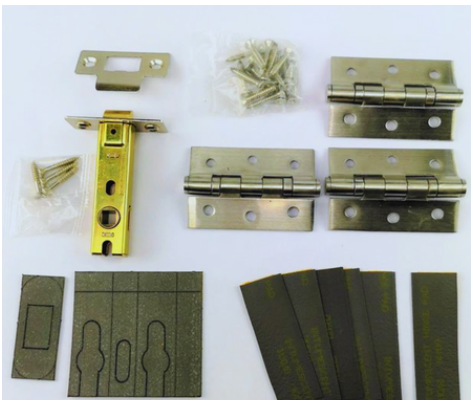
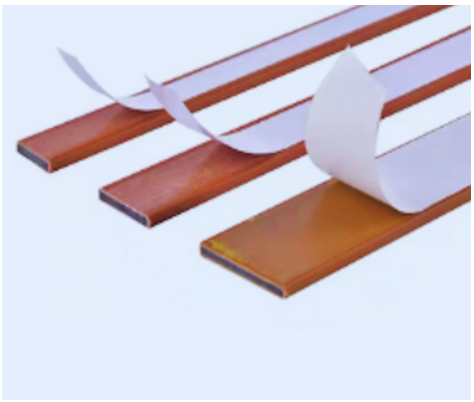
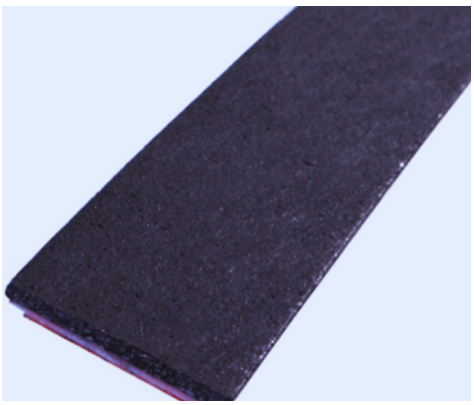
Intumescent Fire Seals

Intumescent fire seals are a type of passive fire protection product used in buildings to help prevent the spread of fire, smoke, and hot gases through gaps and joints. These seals are typically used around doors, windows, and other openings in fire-rated walls and partitions.

Intumescence: When exposed to high temperatures, intumescent materials expand significantly in volume. This expansion helps to seal gaps and joints, thereby preventing the passage of fire and smoke.
Heat Activation: The intumescent material in the seal remains dormant until it reaches a certain temperature, usually around 200°C (392°F). Once activated by heat, it can expand up to 20 times its original size.
Fire Resistance: The expanded material forms an insulating barrier that helps to maintain the integrity of the structure for a specified period, usually ranging from 30 minutes to 2 hours, depending on the product and its application.







Applications

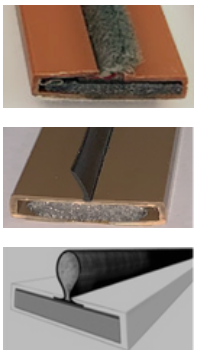
Doors: Intumescent fire seals are often installed around the edges of fire-rated doors. In the event of a fire, the seals expand to close any gaps between the door and its frame, preventing the passage of fire and smoke.
Glazing Systems: Used in fire-rated windows and glass partitions, these seals help to contain the spread of fire while maintaining visibility.
Service Penetrations: Intumescent seals are used around pipes, cables, and ducts that pass through fire-rated walls and floors to maintain the fire resistance of the structure.
Joints and Gaps: These seals can be applied to expansion joints and other gaps in walls and floors to maintain fire separation.

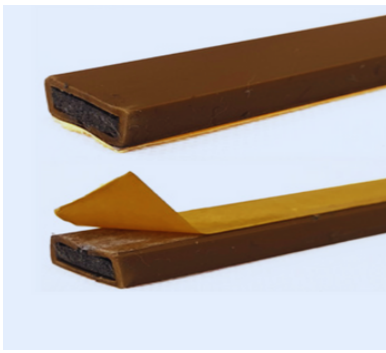
INTUR | Rigid Intumescent Fire Seal Strips

Wedge INTUR are Rigid types of Intumescent fire seals and most suitable for sever application where regular door maintenance is not possible. The PVC covering to the graphite intumescent seal protects from wearing out due to any mechanical damage to the seals. At Wedge we produce and supply different versions including fire only, fire & smoke, fire & acoustic, and fire & weather proof seals of Rigid Fire Seals depending on the end user requirements.

Features and Benefits

- Durability: Wedge rigid PVC encapsulation protects the intumescent material from physical damage, moisture, and other environmental factors, ensuring a longer lifespan.
- Aesthetics: Wedge PVC casing can be produced in various colors and finishes to match the decor of the building, making it less conspicuous compared to some other fire seal types.
- Ease of Installation: These strips are typically easy to install with standard tools, and the rigid nature of the PVC casing helps to ensure a neat and secure fit.
- Consistent Performance: The encapsulation helps maintain the integrity of the intumescent material, ensuring it performs consistently when exposed to fire.





Types of Rigid Intumescent Fire Seals

- Fire Protection Only: Applied when no threat of Smoke
- Fire & Smoke Protection with Brush: Protects against damages from Fire & Smoke.
- Fire & Smoke Protection single / twin blade: Protects against damages from Fire & Smoke
- Fire, Smoke, Acoustics, Weather Protection: Protection from fire, smoke, noise, heat, and water

Applications Rigid Intumescent Fire Seals

- Fire-Rated Doors: Around the perimeter of fire-rated doors to seal gaps between the door and the frame.
- Windows and Glazing Systems: Used in fire-rated windows and glazing systems gaps.
- Service Penetrations: Applied around pipes, cables, and ducts of fire-rated walls and floors.
- Expansion Joints: Suitable for sealing expansion joints in walls and floors to maintain fire separation.

Available Sizes and Thickness

Code	Product Description	Quality	Length, mm	Width, mm	Thick, mm	Unit
INTU R-001	Wedge Intumescent Rigid Fire Seal 10x4	INTUR - 14	2100	10	4	Meter
INTU R-002	Wedge Intumescent Rigid Fire Seal 20x4	INTUR - 14	2100	20	4	Meter
INTU R-003	Wedge Intumescent Rigid Fire Seal 15x4	INTUR - 14	2100	15	4	Meter
INTU R-004	Wedge Intumescent Rigid Fire Seal 10x4	INTUR - 10	2100	10	4	Meter
INTU R-005	Wedge Intumescent Rigid Fire Seal 20x4	INTUR - 10	2100	20	4	Meter
INTU R-006	Wedge Intumescent Rigid Fire Seal 15x4	INTUR - 10	2100	15	4	Meter
INTU R-007	Wedge Intumescent Rigid Fire Seal 10x4	INTUR - 20	2100	10	4	Meter
INTU R-008	Wedge Intumescent Rigid Fire Seal 20x4	INTUR - 20	2100	20	4	Meter
INTU R-009	Wedge Intumescent Rigid Fire Seal 15x4	INTUR - 20	2100	15	4	Meter

Technical Data Sheet

Quality	INTUR10	INTUR14	INTUR20
Thickness, mm	4	4	4
Colour	Brown	Brown	Brown
Texture & Finish	Rigid	Rigid	Rigid
Density, Kg/m3	1367	1250	980
Expansion temperature app. °C	150	150	100
Activation Temperature, °C	280	250	200
Expansion Ratio, min	10 - 14 : 1	14 - 20 : 1	20 - 30 : 1
Expansion pressure, N/mm2	0.6	0.8	1.2
Adhesive	Self-adhesive	Self-adhesive	Self-adhesive
Thermal conductivity W/(mK)	0.21	0.19	0.14
Smoke during fire	Medium Smoke	Low Smoke	No Smoke
Life, years	12	15	30
Strip Length, mm	2100	2100	2100
Strip Width, mm	10, 15, 20	10, 15, 20	10, 15, 20
Char structure	Low	Medium	High

INTUF | Flexible Intumescent Fire Seal

Wedge INTUF are Flexible intumescent fire seals type of passive fire protection product, designed to expand when exposed to heat and seal gaps to prevent the spread of fire, smoke, and hot gases. Unlike rigid PVC encapsulated seals, flexible intumescent fire seals are made from materials that allow them to be more versatile in application and easier to install in irregular or complex shapes.

Features and Benefits

- Flexibility: Can be easily bent and shaped to fit around curves, corners, and irregular surfaces, making them suitable for a wide range of applications.
- Ease of Installation: Typically easier to install compared to rigid seals due to their flexibility.
- Effective Performance: Expands significantly when exposed to heat, creating a robust barrier against fire, smoke, and hot gases.
- Durability: Made from durable materials that maintain their integrity over time, even under varying environmental conditions.
- Zero halogen intumescent fire seals, Rubber free and do not generate any toxic smoke.
- Generates high expansion when exposed to fire or heat, Produces an excellent char structure to provide high integrity. Fire rating from 30 to 120 minutes.

Applications

- Fire-Rated Doors: Installed around the perimeter of fire-rated doors to seal gaps between the door and the frame, providing a reliable fire barrier.
- Windows and Glazing Systems: Used in fire-rated windows and glazing systems to prevent the spread of fire through gaps around the glass.
- Service Penetrations: Applied around pipes, cables, and ducts that pass through fire-rated walls and floors, maintaining the fire resistance of the structure.
- Expansion Joints: Suitable for sealing expansion joints in walls and floors to maintain fire separation.
- Structural Joints and Gaps: Ideal for sealing joints and gaps in various structural elements to prevent fire spread.

Available Sizes and Thickness

Code	Product Description	Quality	Length, mm	Width, mm	Thick, mm	Unit
INTU F-001	Wedge Intumescent Flexible Fire Seal 10x2	INTUF 20	2100	10	2	Meter
INTU F-002	Wedge Intumescent Flexible Fire Seal 15x2	INTUF 20	2100	15	2	Meter
INTU F-003	Wedge Intumescent Flexible Fire Seal 20x2	INTUF 20	2100	20	2	Meter
INTU F-004	Wedge Intumescent Flexible Fire Seal 30x2	INTUF 20	2100	30	2	Meter
INTU F-005	Wedge Intumescent Flexible Fire Seal 40x2	INTUF 20	2100	40	2	Meter
INTU F-006	Wedge Intumescent Flexible Fire Seal 10x2	INTUF 20	2100	10	1	Meter
INTU F-007	Wedge Intumescent Flexible Fire Seal 15x2	INTUF 20	2100	15	1	Meter
INTU F-008	Wedge Intumescent Flexible Fire Seal 20x2	INTUF 20	2100	20	1	Meter
INTU F-009	Wedge Intumescent Flexible Fire Seal 30x2	INTUF 20	2100	30	1	Meter
INTU F-010	Wedge Intumescent Flexible Fire Seal 40x2	INTUF 20	2100	40	1	Meter
INTU F-011	Wedge Intumescent Flexible Fire Seal 10x2	INTUF 14	2100	10	2	Meter
INTU F-012	Wedge Intumescent Flexible Fire Seal 15x2	INTUF 14	2100	15	2	Meter
INTU F-013	Wedge Intumescent Flexible Fire Seal 20x2	INTUF 14	2100	20	2	Meter
INTU F-014	Wedge Intumescent Flexible Fire Seal 25x2	INTUF 14	2100	25	2	Meter
INTU F-015	Wedge Intumescent Flexible Fire Seal 10x2	INTUF 10	2100	10	2	Meter
INTU F-016	Wedge Intumescent Flexible Fire Seal 15x2	INTUF 10	2100	15	2	Meter
INTU F-017	Wedge Intumescent Flexible Fire Seal 20x2	INTUF 10	2100	20	2	Meter
INTU F-018	Wedge Intumescent Flexible Fire Seal 25x2	INTUF 10	2100	25	2	Meter
INTU F-020	Wedge Intumescent Flexible Fire Seal 1120x2	INTUF 20	2100	1120	2	M2
INTU F-021	Wedge Intumescent Flexible Fire Seal 1120x1	INTUF 20	2100	1120	1	M2
INTU F-022	Wedge Intumescent Flexible Fire Seal 560x0.5	INTUF 20	2100	560	0.5	M2
INTU F-023	Wedge Intumescent Flexible Fire Seal 900x1.8	INTUF 14	2100	900	1.8	M2
INTU F-024	Wedge Intumescent Flexible Fire Seal 620x2	INTUF 10	2100	620	2	M2

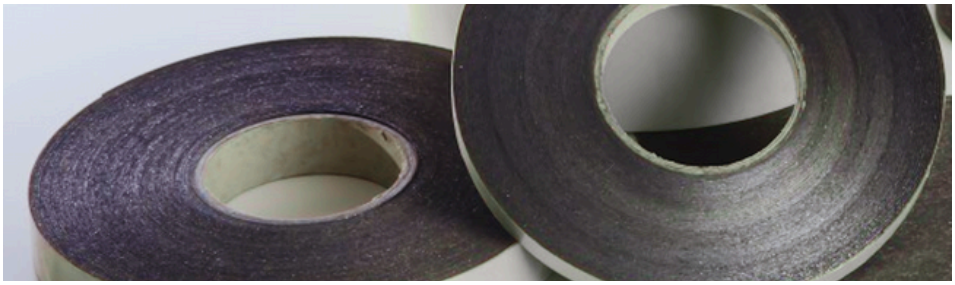
INTUF | Technical Data Sheet

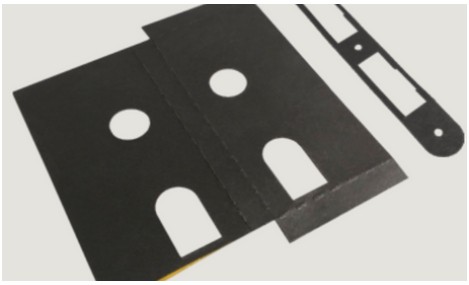
Wedge INTUF Intumescent fire seals are manufactured with high quality grade graphite laminates and high temperature resistant mineral fibres to achieve excellent expansion rate when exposed to high temperature. Wedge Intumescent Fire Seals are rubber free to ensure smoke free environment in case of fire and protects from fire by sealing the joints for 30 minutes to 240 minutes depending on the width and thicknesses are applied.

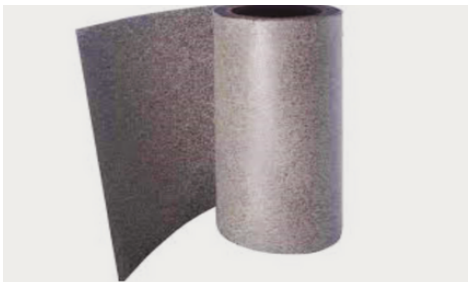
End Use Applications

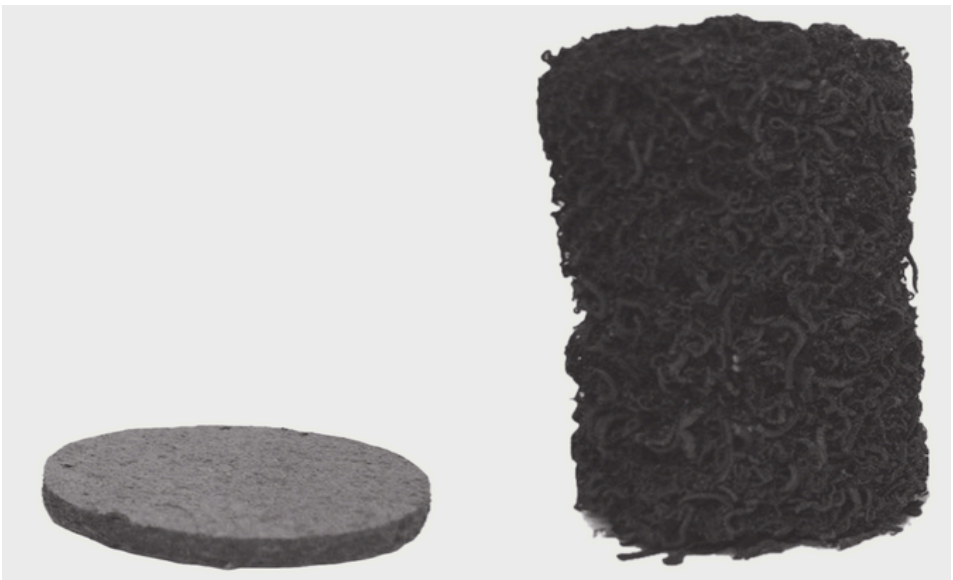
- Fire-Rated Doors: Installed around the perimeter of fire-rated doors to seal gaps between the door and the frame, providing a reliable fire barrier.
- Windows and Glazing Systems: Used in fire-rated windows and glazing systems to prevent the spread of fire through gaps around the glass.
- Service Penetrations: Applied around pipes, cables, and ducts that pass through fire-rated walls and floors, maintaining the fire resistance of the structure.
- Expansion Joints: Suitable for sealing expansion joints in walls and floors to maintain fire separation.
- Structural Joints and Gaps: Ideal for sealing joints and gaps in various structural elements to prevent fire spread.

Quality	Wedge INTUF10	Wedge INTUF14	Wedge INTUF20
Thickness, mm	0.5 to 3	0.5 to 3	0.5 to 3
Colour	Black	Anthracite Grey	Dark Grey
Texture	Smooth flexible	Solid flexible	Highly flexible
Density, Kg/m3	1267	850	750
Expansion temperature app. °C	150	150	100
Activation Temperature, °C	280	250	200
Expansion Ratio, min	10 - 14 : 1	14 - 20 : 1	20 - 30 : 1
Expansion pressure, N/mm2	0.6	0.8	1.2
Adhesive	Self-adhesive	Self-adhesive	Self-adhesive
Thermal conductivity W/(mK)	0.21	0.19	0.14
Smoke during fire	Medium Smoke	Low Smoke	No Smoke
Life, years	12	15	30
Strip Length, mm	1000 - 2500	1000 - 2500	1000 - 2500
Strip Width, mm	10, 15, 20, 25, 30, 40	10, 15, 20, 25, 30, 40	10, 15, 20, 25, 30, 40
Char structure	Low	Medium	High









FAQ | Intumescent Fire Seal Strips

1. What are Intumescent Fire Seal Strips?
Intumescent fire seal strips are materials designed to expand when exposed to high temperatures, typically during a fire. This expansion helps seal gaps around doors, windows, and other openings to prevent the spread of fire and smoke.

2. How do Intumescent Fire Seal Strips work?
When exposed to heat, the intumescent material within the strips expands significantly, filling any gaps and creating a barrier that slows down the spread of fire and smoke. This can provide additional time for occupants to evacuate and for firefighters to control the blaze.

3. Where are Intumescent Fire Seal Strips used?
These strips are commonly used in:
- Fire-rated doors
- Fire-rated windows
- Fire-resistance-rated walls and partitions
- Around service penetrations in fire-rated assemblies

4. How should Intumescent Fire Seal Strips be installed?
Installation varies by product, but generally involves:
- Cleaning the surface where the strip will be applied.
- Measuring and cutting the strip to the required length.
- Removing the adhesive backing (if present) and applying the strip to the surface.
- Ensuring that the strip is firmly pressed into place to avoid any gaps.

5. What materials are Intumescent Fire Seal Strips made from?
They are typically made from a combination of chemicals and materials such as graphite, sodium silicate, or expandable graphite, which react to high temperatures by expanding.

6. How long do Intumescent Fire Seal Strips last?
The lifespan of these strips can vary, but they are generally designed to last for many years if properly installed and maintained. Wedge INTUF20 Grade can be specified for a service life of 30 to 50 years due to its rubber free structure.

7. Do Intumescent Fire Seal Strips require maintenance?
While they require minimal maintenance, regular inspections are recommended to ensure they remain in good condition. Any damaged or worn-out strips should be replaced promptly.

8. Are Intumescent Fire Seal Strips effective against smoke?
Yes, many intumescent fire seal strips are designed to also act as smoke seals, expanding to fill gaps and prevent smoke from passing through.

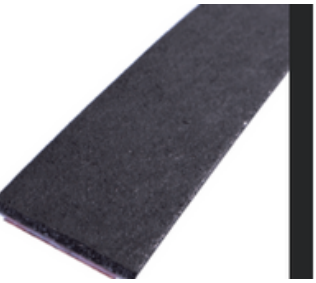
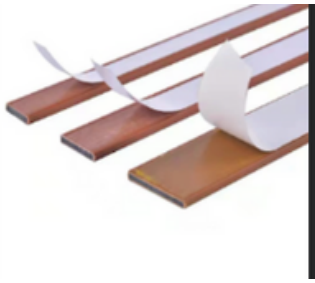
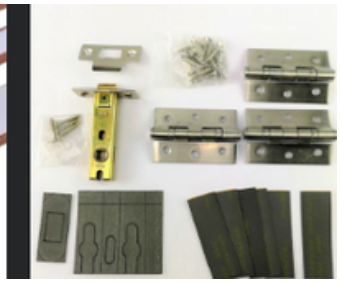
9. Can Intumescent Fire Seal Strips be painted?
It depends on the product. Some intumescent strips can be painted over without affecting their performance, but it is important to follow the manufacturer's guidelines.

10. Are Intumescent Fire Seal Strips required by building codes?
Yes, building codes and fire safety regulations in many regions require the use of intumescent fire seal strips in specific applications, particularly in fire-rated assemblies.

11. How can I choose the right Intumescent Fire Seal Strip for my application?
Consider factors such as:
- The type of opening (door, window, etc.)
- The fire rating required
- The size of the gaps to be sealed
- The manufacturer's specifications and recommendations

12. Can Intumescent Fire Seal Strips be used in combination with other fireproofing methods?
Yes, they are often used alongside other fireproofing measures, such as fire-rated doors, fire-resistant glass, and firestopping products, to enhance overall fire safety.

If you have any specific questions or need further information, feel free to ask Wedge Technical Team!

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