



Product Data Sheet

ASMACO INTUMESCENT ACRYLIC SEALANT

Fire-Rated Intumescent Sealant for Joints & Penetrations | UL 723 | EN 1366-4 | EN 1363-1

DESCRIPTION: ASMACO INTUMESCENT ACRYLIC SEALANT is a one-component, water-based, fire-rated intumescent acrylic sealant designed for internal perimeter sealing of fire-rated door and window frames, as well as linear joints and service penetrations.

The sealant provides effective fire and smoke sealing by expanding when exposed to elevated temperatures, forming an insulating char that restricts the passage of flames, heat, and gases. The product is suitable for sealing joints subjected to moderate movement and for applications involving both combustible and non-combustible substrates.

When installed in accordance with the applicable tested system details, the sealant can provide fire resistance of up to **4 hours (240 minutes)**. Its fire performance is evaluated in accordance with relevant fire-testing standards, including **UL 723, EN 1363-1, and EN 1366-4**, as applicable to the tested system configuration.

The sealant exhibits excellent adhesion to a wide range of construction materials without the need for priming. It is easy to apply, has low VOC content, and does not emit halogenated by-products when exposed to fire.



AREAS OF APPLICATION

- Internal perimeter sealing of fire-rated door frames.
- Internal perimeter sealing of fire-rated window frames.
- Sealing of linear joints in fire-rated walls and partitions
- Fire-stopping of service penetrations (e.g., cables, conduits, and pipes), new construction and refurbishment projects
- Joints between different construction materials (e.g., concrete, masonry, gypsum)
- Sealing gaps around electrical and mechanical services
- Applications requiring fire and smoke resistance in commercial and residential buildings
- Sealing joints in drywall and partition systems
- Protection of openings in compartment walls to maintain fire integrity

KEY PERFORMANCE PROPERTIES

- One-component, ready-to-use acrylic sealant
- Fire-rated performance of up to 4 hours (240 minutes), subject to system design
- Intumescent action expands under high temperatures to form a fire and smoke barrier
- Suitable for sealing linear joints and service penetrations (e.g., cables and pipes)
- Excellent adhesion to a wide range of construction substrates without primer
- Easy application with smooth tooling and finishing
- Accommodates moderate joint movement
- Effective in both combustible and non-combustible constructions
- Helps maintain integrity of fire-rated walls and partitions
- Low VOC formulation for safer indoor use
- Does not emit halogenated by-products under fire conditions
- Durable and resistant to cracking and shrinkage

PACKAGING / SUPPLYING

ASMACO INTUMESCENT ACRYLIC SEALANT is available in 280 ml, Plastic Cartridge, (12 Cartridges / Carton)

STANDARDS

ASMACO INTUMESCENT ACRYLIC SEALANT has been tested in:

■ Caulking & Sealants Surface Burning Characteristics R41900	UL 723, ASTM E 84
■ Penetration Seals:	EN 1363-1:2020
■ Linear Joint / Gap Seals according to	EN 1366-4: 2021
■ Non load bearing elements curtain wall full configurations,	BS EN 1364-3
■ Non load bearing elements curtain wall part configurations,	BS EN 1364-4
■ Door shutter & open able windows,	BS EN 1634-1
■ Building material & structures,	BS 476 – 20
■ Building material & structures,	BS 476 – 22, ISO 834-1, ISO 834-8,
■ Doors & shutters,	ISO 3008
■ Building Construction Glazed elements,	ISO 3009
■ Waterproofing membrane,	ASTM D 570,
■ European Union of Agreement, EUA tc	M.O.AT 30 & 31 para E, EN 12311-1
■ Fire Rated, for 4 hours without any failure.	BS 476 Part 22: 1987 Amd 2014
■ To achieve class 2,	BS 476 Part 7: 1997.
■ Adhesives and Sealants Dubai Municipality Green Building requirements, Passes the test.	GBRS Clause 404.02
■ Linear expansion joint configurations according to	EN1366-4 and to BS 476 Part 22/1987
■ Pipes and cables penetration systems according to	BS 476 Part 22 / 1987.
■ UAE Civil Defense.	Approved



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METHOD OF APPLICATION

Surface Preparation

- Ensure the joint or gap is **clean, dry, and free of dust, oil, grease, or loose particles**.
- Remove old sealant or debris completely.
- For porous surfaces (concrete, masonry), light brushing or air blowing is recommended.
- If required, install **backer rod (PE foam rod)** to control sealant depth.

Tools & Materials Required

- Acrylic fire-rated sealant (cartridge or sausage type)
- Caulking gun
- Backer rod (if gap depth is excessive)
- Spatula or finishing tool
- Masking tape
- Knife / cutter
- Cleaning cloth

A. Application in Linear Joints (Wall-Wall / Wall-Slab / Slab-Slab)

Step-by-Step Procedure:

Step 1 – Joint Preparation

- Check joint width and depth.
- Insert **backer rod** if joint depth exceeds recommended depth (usually depth = ½ of width).
- Apply masking tape along edges for clean finishing.

Step 2 – Sealant Application

- Cut nozzle at 45° angle as per required bead size.
- Insert cartridge into caulking gun.
- Apply sealant evenly, ensuring full contact with joint sides.
- Avoid air pockets or voids.
- new construction and refurbishment projects

Step 3 – Tooling & Finishing

- Tool the sealant immediately using spatula or wet finger.

- Remove masking tape before skin formation.
- Allow curing as per manufacturer's data (typically 24–48 hours).

B. Gap Filling Around Pipes (Penetration Sealing)

Step-by-Step Procedure:

Step 1 – Inspection

- Confirm pipe material (PVC, CPVC, steel, copper).
- Measure annular space (gap between pipe and wall/slab).

Step 2 – Backing Material Installation

- Insert **mineral wool / rockwool** tightly into the annular gap.
- Maintain required depth (usually 25–50 mm depending on fire rating).

Step 3 – Sealant Application

- Apply acrylic fire-rated sealant over the mineral wool.
- Ensure sealant thickness as per fire test detail (commonly 10–20 mm).
- Seal continuously around the full circumference of the pipe.

Step 4 – Finishing

- Smooth surface properly.
- Ensure no cracks or gaps remain

Important Technical Guidelines

- Follow tested system details (UL / BS / EN standards if specified).
- Maintain required **sealant depth and backing material density**.
- Do not apply below recommended temperature (usually +5°C).
- Acrylic fire sealant is generally suitable for:
 - Static joints
 - Small movement joints (limited flexibility)

Not recommended for high movement expansion joints.

COVERAGE RATE

Theoretical coverage table based on joint dimensions and sealant depth, rather than giving one generic m²/kg figure. This is more appropriate for fire-rated linear joints sealing.

Joint Size in WxD mm	Sealant Consumption / Running Meter	280 ml Cartridge Cover Running Meter
5 x 5	25 ml	11.20
6 x 6	36 ml	7.7
10 x 10	100 ml	2.80
12 x 10	1200 ml	2.33
15 x 10	1500 ml	1.87
20 x 15	3000 ml	0.93
25 x 15	3750 ml	0.75

Theoretical Coverage – 280 ml Cartridge

Consumption (ml/m) = Joint Width (mm) × Sealant Depth (mm)

Coverage (m/cartridge) = 280 ÷ Consumption (ml/m)

Suggested Coverage Rate – Penetrations

For penetrations, **not specifying a fixed coverage rate**, because consumption depends on the penetration diameter, annular gap, sealant depth, number of penetrations and the tested firestop configuration.



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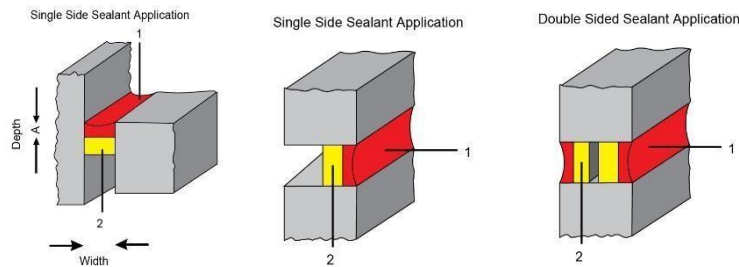
FIRE RATINGS

ASMACO INTUMESCENT ACRYLIC SEALANT has undergone rigorous fire rating testing and has demonstrated its ability to resist penetration for up to 4 hours without failure, according to specified joint configurations. The fire ratings, smoke & flame Spread were tested in accordance with EN 1363-1:2020, EN 1366-4:2021, BS 476 Part 22: 1987 Amd 2014, UL 723, Edition 11, and are applicable under specific testing conditions. Users are advised to adhere to the manufacturer's recommendations to ensure that **ASMACO INTUMESCENT ACRYLIC SEALANT** is suitable for their particular application. It's essential that all substrates used in the system possess an equivalent or higher fire rating to maintain the integrity of the fire protection system.

- All single side joints & Double side joint were tested on fire side
- Mineral wool, Density 100 Kg/m³, Polyethylene, Ceramic Fibre backing materials been used.
- It is recommended to use suitable backing material to ensure the full result.

Refer Fig Applications & Table 2,

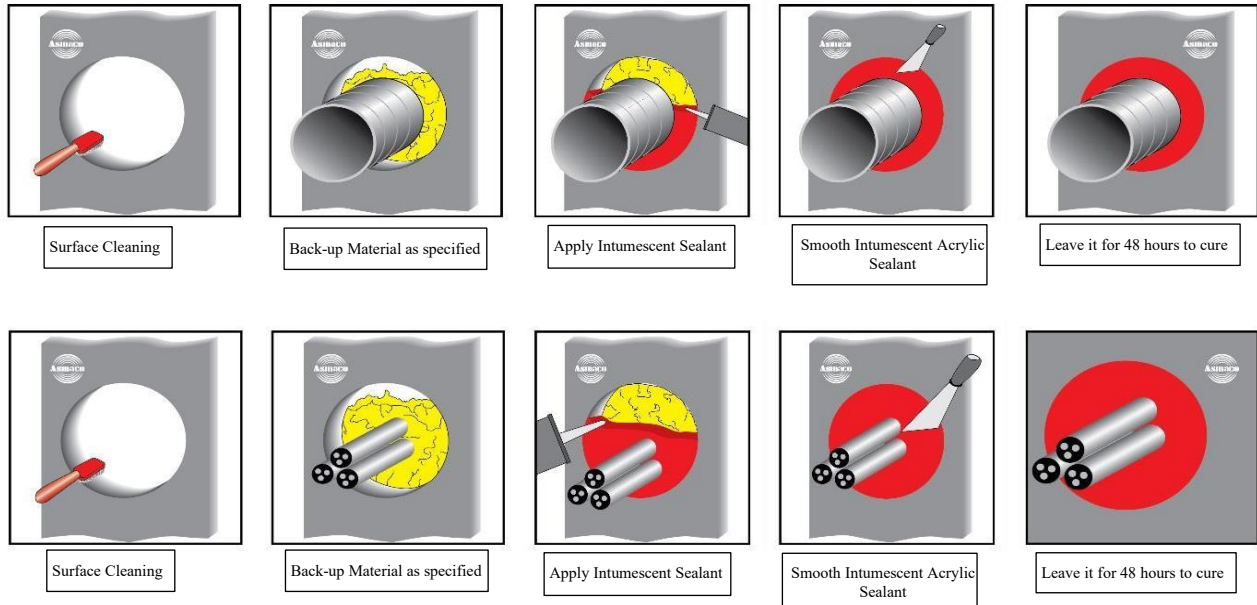
Joint Sealing



1. Sealant
2. Backing

Penetration sealing can be achieved as per the figure given below

Penetration Sealing



SN	DESCRIPTION
	BACKING MATERIAL
	ASMACO INTUMESCENT ACRYLIC SEALANT



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FIRE RESISTANCE CHARACTERISTICS

Table 2

ASMACO INTUMESCENT ACRYLIC SEALANT							
Wall Thickness (Min)	Joint Width (W)	Joint Seal Depth (T)	Sealant Depth (Ts)	Back Filling Material (Tb)	Air Cavities (Ac)	Fire Resistance Rating	Comments
200 mm	6 mm	200 mm	5 mm	20 mm ceramic fire stop backer rod (CFR 530) OR 20 mm polyethylene backer rod	170 mm	Integrity: 240 minutes Insulation: 240 minutes	No Failure
200 mm	15 mm	200 mm	10 mm	10 mm ceramic fire stop backer rod (CFR 530) OR 10 mm polyethylene backer rod	140 mm	Integrity: 240 minutes Insulation: 240 minutes	No Failure
200 mm	20 mm	200 mm	15 mm	30 mm ceramic fire stop backer rod (CFR 530) OR 30 mm polyethylene backer rod	110 mm	Integrity: 240 minutes Insulation: 240 minutes	No Failure
200 mm	25 mm	200 mm	20 mm	30 mm ceramic fire stop backer rod (CFR 530) OR 30 mm polyethylene backer rod	100 mm	Integrity: 240 minutes Insulation: 240 minutes	No Failure

STORAGE, SHELF LIFE & HANDLING

ASMACO INTUMESCENT ACRYLIC SEALANT is temperature sensitive and should be stored in a cool, dry, and covered area, protected from direct sunlight, heat sources, and excessive ambient temperatures. Prolonged exposure to elevated temperatures, including storage in shaded but excessively hot areas, may accelerate product ageing, reduce the stated shelf life, and adversely affect application and performance characteristics. In hot climatic conditions, ASMACO INTUMESCENT ACRYLIC SEALANT must be stored at temperatures below 30°C. Avoid prolonged exposure to extreme temperature fluctuations during storage and transportation.

When stored in its original, unopened packaging under the recommended temperature conditions, the product has a shelf life of up to 12 months from the date of manufacture.

Stock should be managed and consumed on a **First-In, First-Out (FIFO)** basis to ensure optimum shelf life and consistent product performance.

CLEAN UP

Clean equipment immediately with warm water after usage.

HEALTH & SAFETY

Protective clothing such as gloves and goggles should be worn while applying ASMACO INTUMESCENT ACRYLIC SEALANT. In case the material splashes to the skin or eyes wash the same with fresh water immediately.

In critical cases seek medical assistance. In critical cases seek

QUALITY & CARE

All products originating from ANCHOR ALLIED FACTORY LLC Sharjah, UAE. facility is manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001, ISO 45001 and ISO 50001.

CERTIFICATIONS



UL Classified – Certificate of Constancy of Performance (CoCP). Product evaluated by UL Solutions in accordance with EN 1363-1:2020, EN 1366-4:2021, Constancy of performance verified under factory production control.



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TECHNICAL SPECIFICATIONS

PROPERTIES	TYPICAL VALUES	TEST STANDARDS
Color	Red & Grey	—
Consistency	Smooth Paste	—
Base	Acrylic Dispersion	—
Service Temperature	- 20°C — +80°C	—
Application Temperature	+5°C — +45°C	—
Skin Over Time	10 min Maximum (25°C and 50% R.H)	ASTM C 920-18 / ASTM C 679-15
Tack Free Time	>30 min @ 25°C	ASTM C 679
Paint Ability	Yes	—
UV Resistance	No Deterioration	ASTM G 53
Fire Rating	240 min	EN 1366-4:2021
Slump Resistance	Nil	ASTM D 2202
Density, g/m ³	1.50 ±0.02	ASTM D 1475
Hardness Shore A	~ 40	ASTM D 2240
Elongation at Break	≥ 100 %	ASTM D 412
E 100 Modulus	~ 0.50 N/mm ²	ASTM D 412
Tensile Strength	≥ 1.20 N/mm ²	ASTM D 412
VOC	1.5 g/Liter	USEPA-24
VOC	1.5 g/Liter	SCAQMD - 1168

Properties listed are based on laboratory-controlled tests, all values given are subject to 5-10% tolerance.

Regional Compliance Notice

Please note that regulatory requirements may vary from one region to another. As a result, product information and recommended applications may differ between countries. For accurate and up-to-date details on product specifications and approved uses, and for any technical guidance, please contact Technical Department of ANCHOR ALLIED FACTORY L.L.C. SHARJAH, UAE

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