

Commercial Solutions Division

# 3M™ Impact Protection Attachment System

## 3M™ Safety & Security Impact Protection Attachment Sealant

Product Bulletin

### 1. Product Description

3M™ Safety & Security Impact Protection Attachment (IPA), is a one component silicone sealant. It is intended for use with 3M™ Safety and Security Window Films. This window film attachment system, or “wet glaze”, anchors the film to the frame. The product line includes three different colours: black, white and grey.

### 2. Application

3M™ Safety & Security Impact Protection Attachment Sealant is intended for use with 3M™ Safety and Security Window Films, interior and exterior application on flat glass substrates, to enhance the overall performance of 3M™ Safety and Security Window Films.

### 3. Typical Properties

These are indicative values for 3M™ Safety & Security Impact Protection Attachment Sealant.

Property	Test method used	Units	3M IPA
Curing time (25°C, 50% rH)	ASTM C679	Days	< 14
Full adhesion	ASTM C679	Days	< 21
Tack-free time (25°C, 50% rH)	ASTM C679	Minutes	60 - 70
Flow, sag or slump	ASTM C639	Inches	0.1
Working time (25°C, 50% rH)	ASTM C639	Minutes	10 - 20
Specific gravity		n/a	1.4
VOC content		g/l	30
Cured properties after 7 days at 25°C, 50% rH			
Ultimate tensile strength	ASTM D412	Psi (MPa)	350 (2.41)
Ultimate elongation	ASTM D412	%	525
Durometer hardness, Shore A	ASTM D2240	Points	40
Tear strength, Die B	ASTM D624	ppi	49

## 4. User Information

### 4.1 Shelf Life and storage (prior to application)

Shelf life is at least 12 months from the manufacturing date. Material should be stored in its original packaging away from direct sunlight. Recommended storage conditions are +21°C and 40-50% relative humidity. Avoid extreme temperature ranges during storage.

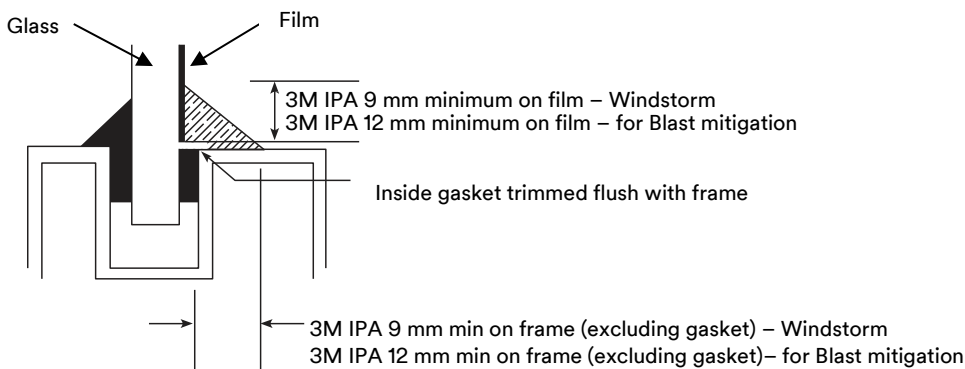
The shelf life as defined above remains as indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as warranty

### 4.2 Application

These are indicative values for 3M™ Window Film products.

Preparation	Thorough cleaning of window frame and glazing is required before applying the window film and IPA. Install back-up material, setting blocks, spacer shims and tapes
Application method	Apply IPA in a continuous step using a positive pressure and suitable bulk dispensing equipment. Tool the sealant to spread it against the window film and joint surface.
Application temperature	From +4°C to +30°C
Service temperature	From -40°C to +70°C
Drying Time	The average curing time is between 7 and 14 days depending on ambient conditions. Full adhesion is reached after 14 to 21 days, also dependant on ambient conditions
Blast mitigation	Use a minimum of 12 mm bead overlap on both frame and film
Windstorm debris protection	Use a minimum of 9 mm bead overlap on both frame and film

Figure 1



## 5. Installation Instructions

- Apply a 25 mm strip of 3M™ Scotch™ Safe Release™ Blue Masking Tape to the film surface 9 mm in from the edge of the film to all four sides. Note: This dimension will depend on the application — 9 mm or 12 mm
- Apply a 25 mm strip of 3M Safe-Release Blue Masking Tape to the window frame 9 mm from the edge of the trimmed gasket. Note: This dimension will depend on the application — 9 mm or 12 mm. This will form a parallel sealant channel that will allow a uniform sealant bead to be applied to the glass/frame interface. Note: Use a clean drop cloth before proceeding to the next step.
- Apply a triangular bead of IPA Sealant, and tool as needed to form an acceptable finish. It is recommended to start in a corner and apply the sealant bead out approximately 15 cm. Then turn the gun and push the sealant bead to the next corner where the same method is repeated. Pushing the sealant bead will ensure proper penetration and minimize the chances of air gaps in the bead. Pulling the gun can also be done if confident no air gaps are formed.
- Smooth the sealant bead with an appropriate tool, if necessary, to give a finished look. Tooling should be completed in one continuous stroke immediately after sealant application and before a skin forms.
- Carefully remove the two masking strips from the glass/frame immediately after tooling. Do not allow the excess sealant to contact the film, frame or flooring surfaces.
- In case uncured or excess material does remain on the film or frame, it should be removed using a cloth dampened with isopropyl alcohol or 3M™ Citrus Based Cleaner.
- A light coloured drop cloth is needed to protect the work area. Be careful not to step on sealant and transfer it to surrounding surfaces.
- It is recommended not to clean the film/IPA system for at least 36 hours following the installation

## 6. Remarks

This bulletin provides technical information only.

To request additional product information see address below.

## Important Notice

All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law.

Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith.

Responsible for this technical bulletin:



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