

## Antas-166 Two-Component Silicone Structural Sealant for Insulating Glass



antas-166 is a two-component, neutral curing silicone structural sealant. It is specially designed for structural glazing in Insulating Glass, and with the advantage of high strength, high modulus, etc.. It has excellent performance of adhesion, weather resistance, high and low temperature resistance. It fully meets the requirements of structural assembly of insulating glass.

### Features:

1. Neutral curing, no pollution or corrosion on metal, coated glass and other building materials.
2. The curing speed can be adjusted, and has fast curing rate, it is suitable for continuous construction of automatic and manual production line.
3. Excellent performance within broad temperature range. The cured sealant will not turn brittle, hardened or cracked at  $-40^{\circ}\text{C}$ . It will not turn soft or deteriorated, and will keep good strength and flexibility at  $120^{\circ}\text{C}$ .
4. Excellent resistance to weather, UV, ozone and water.
5. Compatibility with other neutral silicone sealants and other accessory facilities of structural glazing.

### Application

1. Intended for the structural glazing of the secondary sealing in insulating glass
2. Purposely designed for structural glazing of insulating glass

## Technical parameters (GB 24266-2009)

Number	Test items		Standard Ordain	Measured value	
1	Appearance		Even, exquisite paste, No bubble, no skinning, no gel	Even, exquisite paste, No bubble, no skinning, no gel	
2	Applicable period, 20min, s		$\leq 10$	1.7	
3	Hardness, Shore A		30~60	39	
4	Tack free time, h		$\leq 3$	1.8	
5	Tensile Modulus, MPa(10%)		$\geq 0.15$	0.20	
6	Fixed adhesion		Fixed 25%, no destruction	No destruction	
7	Heat deterioration	Mass loss, %	$\leq 6.0$	1.5	
		Crackle	No crackle	No crackle	
		Powdering	No powdering	No powdering	
8	Sag degree	Horizontal, mm,	No deformation	No deformation	
		Verticality, mm,	$\leq 3$	0	
9	Tensile adhesion	23℃	Tensile strength, MPa	$\geq 0.60$	1.06
			Damage area of bonding, %	$\leq 5$	0
		90℃	Tensile strength, MPa	$\geq 0.45$	0.83
			Damage area of bonding, %	$\leq 5$	0
		-30℃	Tensile strength, MPa	$\geq 0.45$	1.91
			Damage area of bonding, %	$\leq 5$	0
		After water immersion	Tensile strength, MPa	$\geq 0.45$	1.09
			Damage area of bonding, %	$\leq 5$	0
		After water & UV-radiation	Tensile strength, MPa	$\geq 0.45$	0.92
			Damage area of bonding, %	$\leq 5$	0

**Standard:**

1. GB 24266-2009
2. GB 16776-2005
3. ETAG 002-2012

**Joint design:**

The joint design of the structural sealant should be done by professional persons. For structural purpose, the substrate samples with accessory materials and design blueprint should be sent to Jointas for tests before the project start.

**Priming:**

Priming is usually required when using antas-166. Moreover, sealant adhesion should always be tested in advance to determine the need of primer. If required, primer should be applied in a thin film to the joint surface by using a clean lint-free cloth and allowed to dry before sealant application.

**Limitation:**

antas-166 silicone structural sealant for insulating glass should not be applied:

- 1) the structural glazing of glass curtain wall
- 2) as a primary or single sealing in an insulating glass unit
- 3) When substrate surface temperature beyond 40° C or below 10° C.

**Testing:**

Several in-house quality control tests are recommended to ensure optimum sealant performance. These tests include:

1. butterfly test to ensure proper mix
2. working life or cure test to ensure expected sealant cure rate at proper mix ratio.
3. Tab adhesion to ensure proper sealant adhesion to production surfaces.

These tests should be performed every time when base or curing agent are changed, or every time the production line is started. Specific procedures for these recommended tests can be supplied by Guangzhou Jointas.

**Surface preparation:**

Before using this product, clean all surfaces, removing all foreign matter and contaminants, such as grease, oil, dust, water, frost, surface dirt, old sealants, glazing compounds and protective coatings. The glass is recommended to be cleaned and dried for two times.

**Equipment cleaning:**

When not being used, it is recommended that the dispensing equipment should be purged either with the uncatalyzed base, or flushed with a suitable solvent. If cured sealant has built up inside the equipment, it is recommended to flush the equipment for an appropriate time. The solvent dissolves cured silicone sealant and provides optimum cleaning performance.

**Technical service:**

Technical details are available in Jointas for customers. Adhesion test, compatibility test and stain test are available before sealant application.

**Curing and maintenance:**

To obtain ultimate physical properties, antas-166 should be thoroughly mixed using an airless mixing system. The curing can may be adjusted by changing the base to curing agent mix ratio from 9: 1 to 13: 1 by volume. The recommended mix ratio the base to curing agent is 11: 1. Sealant physical properties will not significantly change over this range. Changes in the temperature and humidity of the environment, however, will affect the working life. Neither hand-mixing nor mechanical mixing is satisfactory due to incorporation of air resulting in altered physical properties. Because of its reactivity with atmospheric moisture, antas-166B should not be exposed to air for long time. During shutdown of mixing equipment, dispensing and mixing lines should be purged with uncatalyzed base to minimize sealant build-up.

**Safety:**

It is nontoxic after entirely cured. Avoid contacting eyes when operating. If happened, rinse opened eye under running water for several minutes. During the curing process, sealant will release a small amount of organic molecules. Construction should ensure good ventilation. If necessary, take protective measures. Please keep children out of reach.

**Transport and storage:**

This product is flammable but not explosive, and can be delivered by normal means of transportation. The products must be stored under 27° C, in the cool and dry place.

**Packing:**

Antas-166A: A component 200L ferrous drum, net volume 180L

B component 20L plastic pail, net volume 19L

Antas-166B: A component 20L plastic pail, net volume 19L

B components 2L plastic pail, net volume 1.9L

**Storage term and shelf life:**

9 months from manufacturing date if stored in its unopened original package in a dry and shady place below 27°C.

**Color:**

Antas-166A white

Antas-166B black

Mixed is black

**antas-166 Silicone Structural Sealant For Insulating Glass (180L+19L) Construction length (m)**

Thickness, mm	Width, mm						
	6	9	12	15	18	21	24
6	5528	3685	2764	2211	1843	1579	1382
9	--	2457	1843	1474	1228	1053	921
12	--	--	1382	1106	921	790	691

**Note:**

Because of the differences of the interface design, installation location, maintenance techniques, and the site volume loss, the actual amount of sealant is also inconsistent.

**Limited warranty information**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's test to ensure that our products are safe, effective, and fully satisfactory for the intended use shall not be taken as inducements to infringe any patent. The customer's exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

Antas disclaims liability for any incidental or consequential damages.