

Technical Data Sheet

antas[®] 166

Two Component Structural Silicone Sealant for IGU

DESCRIPTION

antas[®] 166 is a two component, neutral curing, structural silicone sealant. It is specially designed for the secondary sealing of Insulating Glass Unit (IGU).

antas[®] 166 has high modulus, excellent weather resistance properties and excellent adhesion to most building materials including aluminum, steel, glass etc. Mixed and cured at designed ratio, antas[®] 166 can provide long term structural sealing at a wide range of service temperature.



FEATURES

Elastomeric sealing is formed by mixing and curing of the two components at the designed ratio.

- With adjustable curing speed, antas[®] 166 is suitable for automatic continuous processing with fast curing speed.
- Neutral curing with no harmful emission, no staining, no corrosion to building

materials eg metal or coated glass etc.

- Excellent adhesion to most building materials including aluminum, steel, glass etc.
- Excellent weathering performance, high resistant to UV and hydrolysis.
- Service temperature ranging from -50 to 150°C, maintain good elasticity and physical strength.
- Good compatibility with other neutral cured silicone sealants.

USES

antas[®] 166 is specially designed for:

- Secondary sealing of Insulating Glass Unit (IGU)
- Other glazing and industrial uses as identified

STANDARD AND COMPLIANCE

- EN 1279.2, EN1279.4
- GB 16776-2005
- GB 24266-2009

APPLICATION

To obtain optimised physical properties, antas[®] 166 should be thoroughly mixed using specialised airless mixing system.

The recommended mixing ratio of Component A and Component B is 11:1. The curing rate can be increased by using higher ratio of Component B. The adjustment of mixing ratio of Component A and Component B should be within the range of 9:1 to 13:1 by volume. The

physical properties of sealant are not changed significantly within this range. Variations of the temperature and humidity of the environment, will affect the pot life and curing rate.

Open air hand or mechanical stir mixing is not recommended due to the incorporation of air bubbles which may affect the finished physical properties. Extended long period exposure to air should be avoided. During temporary shut downs of mixing equipment, dispensing and mixing lines may be purged with Component A to minimise skinning.

TYPICAL PROPERTIES

No.	Test items		Test result
1	Physical form		Homogeneous paste, free of bubble, skin or lump.
2	Rheological Properties	Vertical slump, mm	0
		Horizontal slump, mm	No deformation
3	Extrudability		Pass
4	Tack free time, hours		1.8
5	Pot life, min		>20
6	Hardness, Shore A		35 - 45
7	Heat aging	Weight loss, %	1.5
		Cracking	No
		Caulking	No
8	Tensile adhesion, MPa	Initial	1.10
		After heating at 90°C	0.83
		After freezing at -30°C	1.91
		After water immersion for 7 days	1.09
		After UV exposure plus UV exposure and wetting	1.21

PROCESS TESTING

It is recommended to conduct in-process tests during the manufacturing process to ensure optimised sealant performance including:

- Butterfly test to check mixing quality
- Pot life or curing rate tests to ensure expected sealant curing rate at the recommended mixing ratio.
- Test of adhesion to required surfaces.

The tests should be performed when changing to new drums, or whenever the production is restarted from stopping. Specific procedures for the recommended tests can be obtained from by Antas.

SURFACE PREPARATION

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

PRIMING

Priming is usually not required when using antas® 166. However, adhesion should always be tested to determine whether the primer is needed. If required, primer should be applied in a thin film on the jointing surface using a clean lint-free cloth and allowed to dry before the sealant is applied.

EQUIPMENT CLEANING

It is recommended to flush with Component A or suitable solvent when the sealant dispensing equipment is not used. To clean sealant built up inside the equipment, it is recommended to flush the equipment with appropriate solvent. The recommendation of cleaning solvent can be obtained from Antas.

LIMITATIONS

antas® 166 silicone sealant for insulating glass unit should not be applied:

- As the primary or single seal in an insulating glass unit.
- In totally confined spaces.
- On the surface of substrate that bleeds oil, plasticizer or solvent etc.

- In contact with or expose to sealants that release acetic acid.
- Under continuous water immersion or on wet surface or surface with fog
- When the surface temperature of substrates is below 10°C or above 40°C.
- Surfaces in direct contact with food.
- Other unsuitable conditions determined by trial.

SAFETY

antas® 166 is not harmful when fully cured. Avoid direct contact with eyes when operating. In case of accident, rinse opened eye under running water for several minutes.

During the curing process, small amount of organic molecules is released. Keep good ventilation at the operating site. Avoid applying in confined spaces.

Read and follow material safety data sheet for safe handling or using.

PACKAGING

Component A: 189L in open top steel drums
Component B: 19L in open top steel drums

COLOUR

Component A: white;
Component B: black;
Mixture of component A and B: black.

TRANSPORTATION & STORAGE

antas® 166 is non-dangerous goods for transportation.

The product should be stored in a dry and cool place between 5 to 27°C. The shelf life is 12 months from the date of manufacturing under normal storage conditions.

Estimated coverage: linear metres by one set of antas® 166(180L+18L)

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: Due to the differences in the joint design, installation location, maintenance techniques and the waste during production, the actual coverage of sealant may vary from the above estimation.

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