

MF881-25HM

25 Years Warranty

Two Component Silicone Structural Sealant for Gas-filled Insulating Glass

Insulating Glass, Structural Glazing, Facade, Curtain Wall System

◆ APPLICATIONS

SILANDE MF881-25HM is a high performance two-component neutral cured silicone sealant specifically developed for the manufacturing of air and gas-filled insulating glass in structural glazing applications. This product is suitable for professional experienced IG manufacturer only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

◆ FEATURES

- Two component, neutral cured silicone structural sealant.
- Excellent adhesion to a wide range of substrates including coated, enamelled and reflective glasses, anodised and polyester paint coated aluminium and stainless steel.
- Excellent temperature stability: - 60°C to 180°C.
- High level of mechanical properties.
- High elasticity and high modulus.
- Low moisture vapour transmission property.
- Low gas permeation property.

◆ TYPICAL PROPERTIES

	TEST ITEMS	UNIT	MEASURED VALUE
Base (Com A)	Appearance	/	White / Grey
	Density	g/cm ³	1.55
	Viscosity	mPa.S	550,000
Catalyst (Com B)	Appearance	/	Black / White
	Density	g/cm ³	1.03
	Viscosity	mPa.S	80,000
Mixture By weight (A:B = 12:1)	Appearance	/	Black / White / Grey
	Density	g/cm ³	1.54
	Application Time (23°C, 50%)	Minutes	30~60
	Tack-free Time (23°C, 50%)	Minutes	30~90
Sag	Placed Vertical (50°C)	mm	0
	Placed Horizontal	/	No deformation
Hardness	24h	Shore A	40
	14 days	Shore A	55~60
After 28 days at T 23°C and 50% R.H.			
23°C Tensile Strength	Ru,5	Mpa	1.16
	Cohesive failure area	%	100
-20°C Tensile Strength	Ru,5	MPa	1.24
	Cohesive failure area	%	100
80°C Tensile Strength	Ru,5	MPa	0.76
	Cohesive failure area	%	100
23°C Shear Strength	Ru,5	MPa	0.81
	Ru,5	MPa	0.89
-20°C Shear Strength	Ru,5	MPa	0.89
	Cohesive failure area	%	100
80°C Shear Strength	Ru,5	MPa	0.69
	Cohesive failure area	%	100
Creep Test		mm	0.04

Bubble	/	Without visual bubble
Resistance to UV-Ozone	/	Continuous irradiation under water-UV 2500 hrs, No change.
Elastic Recovery	%	0
Volume Shrinkage	%	3.60
Moisture Vapour Transmission Rate (MVPR)		17.7 [gr/m ² .24hrs.2mm] - EN1279/4
Gas Permeation Rate (Ar)		755 x 10 ⁻³ [gr/m ² .hrs] - EN1279/4
Remarks: R _{u,5} describes the standard value of adhesion strength.		

◆ **MIXING AND DISPENSING INSTRUCTIONS**

SILANDE MF881-25HM has to be mixed homogeneously and air-bubble free in the correct ratio. MF881-25HM should be mixed in a ratio of 12:1 base to curing agent by weight, or equivalent 8:1 by volume for optimal properties. At this mix ratio, the sealant typically exhibits a working time of 30~50 minutes and allows units to be handled within 3 hours. Slight variations in mixing ratio can be tolerated, but these should not exceed 11:1 to 14:1 by weight to ensure minimum properties are obtained. To obtain the ultimate physical properties from SILANDE MF881-25HM Silicone Structural Sealant it is recommended that the base and curing agent are thoroughly mixed using an airless mixing system found on most existing commercially available two-part silicone dispensing machines. Neither hand mixing nor the use of hand-held power mixers are satisfactory due to their incorporation of air into the material during mixing that would result in altered physical properties of the cured sealant. Most commercially available metering and mixing equipments are suitable.

Part A is stable in air, Part B is moisture-sensitive, must only be exposed briefly to air.

◆ **CURING**

When mixing MF881-25HM base + SILANDE MF881-25HM catalyst at approximately a 12:1 weight ratio, the material will become tack-free at about 50 minutes under ambient conditions of at 23°C, 50% R.H. Under these conditions approximately 70% of strength should develop within 24 hours. Development of full properties requires full evaporation of cure by-products and will normally be achieved within 7 days. Full properties will take additional time in colder climates or deeper SSG cavities. The speed of reaction depends on mainly on the temperature, the higher temperature the faster curing process. Heating above 50°C is not advisable as it may lead to bubble formation.

◆ **APPLICABLE STANDARDS**

- EU Specification: EN 1279 (part 2, 3, 4)
- EOTA ETAG 002 (IFT Rosenheim / TUV Rheinland) and EN 15434

Weight Ratio	Volume Ratio
10:1	6.5:1
11:1	7.0:1
12:1	8.0:1
13:1	8.5:1
14:1	9.0:1

◆ **SURFACE PREPARATION - IGU:**

GLASS / SPACER - To achieve good adhesion, surfaces must be clean, dry and free from oil, grease and dust.

◆ **SURFACE PREPARATION - SGS:**

Clean all joints and glazing pockets, removing all foreign matter and contaminants such as grease, oil, dust, water, frost, surface dirt, old sealants, or glazing compounds and protective coatings. Metal, glass and plastic surfaces should be cleaned by mechanical or solvent procedures. Where used, solvent (non-water alcohol / acetone) should be wiped on and off with clean, oil- and lint-free cloths. Advice on specific applications and surface pre-treatment methods is available from the Technical Service Department of SILANDE.

◆ APPLICATION LIMITS

It is important when selecting components for a project that adhesion and compatibility tests are carried out, and found to be successful, before the project starts.

MF881-25HM adhesion with glass and Alu.spacer must be tested in advance and compatibility of gaskets, backer rods, setting blocks and other accessory materials with MF881-25HM best to be tested in advance.

Regarding facade structural glazing, primer is not usually required when using SILANDE MF881-25HM. However, it is essential that adhesion be tested prior to use. Specific primer recommendations will be made by SILANDE on a project basis. Please contact SILANDE for further advice.

◆ SHELF LIFE AND STORAGE

12 months from the date of production below 30°C.

◆ COLORS

Black / Grey / White

◆ FIRST AID INFORMATION

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give person two glasses of water. Never give anything by mouth to an unconscious person.

Keep out of reach children. Refer to Material Safety Data Sheet (MSDS) and Technical Data Sheet (TDS) for details. **Emergency Telephone Number:** +86 371 67982270

◆ PACKAGING

Com A 265kg/drum

Com B 19 kg/pail

Typical Section of Structural Glazing with Symmetric Gas Filled Insulating Glass Unit

