

SI8603

Silicone Gel Sealant

Premium Quality & Ultimate Service

High transparency liquid optical silicone gel SI8603

■ Technical Data Table

PROPERTY	STANDARD/UNITS	VALUE of SI8603	
		PART A	PART B
----	----	PART A	PART B
Material	----	Polysiloxane	Hydrogen polysiloxane
Color	Visual inspection	Colorless Liquid	Colorless Liquid
Viscosity	25°C, cps	6000	6000
Density	25°C, g/cm ³	0.99	0.99
Mixture/mass ratio	----	A:B=100:100	
Viscosity of mixture	25°C, cps	6000	
Operation time	25°C, min	30	
Cure condition	RTV	23°C /2 hour; 80°C /30min; 120°C /15min	
Cured appearance	----	Colorless transparent gel	
Hardness	Shore 00	60	
Tensile strength	MPa	0.7	
Tear strength	N/mm	3	
Elongation	%	100	
Refractive Index	23°C, 460nm	1.45	
Transparency Index	Thickness 2mm, %	92	
Application temperature	°C	-60~260	

Note: Crosslinking by heating does not affect the properties of SI8603 A/B. However, dimensional changes do occur that should be kept into account

■ Product Description

SI8603 is two-component, silicone elastomer

which can cure at room temperature by a poly-addition reaction. This reaction can be accelerated by heat.

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■ Typical Applications

- Provide a glassy clear appearance to parts manufactured using it. The rubber is an excellent candidate to consider for cost-efficient manufacture of highly transparent optical parts, with very low modulus.
- Rain-light sensors, camera systems, optical sensors.

■ Key Features

1. Easy processing and curing
2. Middle viscosity, easily mixing as 1:1 by weight or by volume.
3. Excellent transparency
4. High stability to ozone and ultraviolet light
5. High temperature stability
6. High stability and flexibility at low temperatures
7. Outstanding resistance to aging and weathering
8. Low hardness, soft and flexible

■ Transport & Storage

- When stored at or below $-5\sim 30^{\circ}\text{C}$ in the original unopened containers, this product has a usable life of 12 months from the date of production. Sampling test is necessary for products which exceed shelf life before taking use. Beyond this date, Maxtech Chemical no longer guarantees that the products meet sales specifications.

It's non-dangerous goods, can be transported as normal chemicals, CAUTION leakage during transport.

■ Packing Specification

- Part A—1/5 /20/ KG/Bucket
- Part B—1/5 /20 KG/ Bucket.

■ Directions for Use

Remix each of the two components (part A and B) every time before using.

1. Mixing of the two components

Add 100 parts A to 100 parts B.

The two components may be intimately mixed either by hand or using a low-speed electric or pneumatic mixer to minimize the introduction of air into the mixture.

The viscosity of part A and B can be reduce using Maxtech 2300, add 5 to 10% of the quantity of SI8603. This will make no significant change to the mechanical properties after polymerization. Up to 30% of Maxtech 2300 can be added without causing exudation.

2. Degassing

After mixing base and catalyst, it is recommended to eliminate entrapped air.

If the processing is done with the help of a machine both parts are degassed before mixing. The SI8603 A&B is degassed under a vacuum of 30 to 50 mbar. Under vacuum, the product expands 3 at 4 times its initial volume and forms bubbles on its surface. These bubbles will disappear gradually and the mixture will sink back down to its initial volume. Wait a few minutes to ensure complete degassing and then release the vacuum. The product is ready for use.

Remark: release the vacuum several times improves the degassing. For easier degassing only fill a recipient to 1/3 of its height.

The product can be poured by gravity or under pressure. SI8603 A and B is easier to use than

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normal RTV because the viscosity of the two components increases relatively slowly.

3. Cross linking

At 23°C, the moulds can be demoulded after 24h. In order to achieve the best possible performance levels from the moulds it is preferable to wait for 24 h before using them. If accelerated cure is desired, mild heat should be preferred. Conversely at lower temperature polymerization is much slower, at 20°C 36h may be necessary to complete cross-linking. Be aware that contact with certain materials can inhibit the curing of this RTV:

- Natural rubbers vulcanized with sulphur
- Polycondensation RTV catalysed with metal salts
- PVC stabilizing agents
- Amine cured epoxies
- Sulphur containing clays.

■ Safety Operation Data

MSDS isn't included here. Please read TDS, MSDS and label carefully before operation. You can get MSDS from MAXTECH or other distributors, or mail to service center maxtech@shmaxtech.com

■ Warranty and Liability

All product properties and application details based on information believe to be reliable and accurate. But you still need to test its property and safety before application. The advice we supply don't apply in any circumstances. MAXTECH don't make assurance of any other applications outside the specification until MAXTECH supply a special written guarantee. MAXTECH is only responsible to replace or refund if this product is defective within the warranty period stated above. MAXTECH makes it clear that will not be liable of any accidents.

In case of doubts, it is recommended to test the substrate by applying a small quantity of the mixed silicone on a restricted area. Take note that cross contaminates due to improperly cleaned tools or devices are a most frequent cause for inhibition

■ Attention of operation

- Keep away from Children
- Avoid contact with eyes and skin. If contact with your skin, scrub first with soap water or alcohol, then rinse with water. If contact with your eyes, rinse with plenty of water, and seek medical treatment immediately.
- It is forbidden to build on the surface of the wet substrate.

Special Notes: All recommendations concerning our products, including transportation, storage, and handling are based on our current knowledge and experience under normal conditions. In practical application, results may differ because of materials and actual site conditions change, our company won't guarantee or bear any legal responsibility. In order to ensure the bonding effect and the compatibility of products and materials, it is recommended to do the compatibility test or consult MAXTECH Technical Services before proceeding with the full application.