

SEMICOSIL[®] 989/1k Transparent

Adhesive/Sealant

General Information

SEMICOSIL[®] 989/1k Transparent Adhesive Sealant is a one-component elastomeric silicone designed to seal or gasket electronic substrates and assemblies.

Features

- Solvent-free
- Rapid thermal cure
- Thixotropic
- Excellent adhesion
- High shore A hardness

Specifications

Typical Property values are not intended for use in the preparation of specifications. Please contact Wacker Silicones Corporation for assistance and recommendations before writing specifications on this product.

Use Information

Surfaces should be clean and free of dirt and other contaminants. Application techniques include both robotic and manual guns along with silkscreen and knife coaters for thin film requirements.

Typical Properties

Properties	Characteristics	Test Method
Appearance	Translucent	WSTM-2278
Viscosity (Haake PK1-3.0) Shear Rate, s ⁻¹ /viscosity, cps.....	25/30,000 0.1/200,000 0.02/5,000,000	
Specific Gravity, 25°C.....	1.1	WSTM-2123
Shelf-life, 23°C (73°F), months	6	WSTM-2103
Cure Time*, minutes		
110°C	30	WSTM-2103
150°C	15	WSTM-2103
Physical - As Cured (1 hour, 150°C)		
Hardness, Shore A.....	55	WSTM-1110
Elongation, %	200	WSTM-1128
Tensile Strength, N/mm ² (psi)	6 (870)	WSTM-1228
Tear Strength, N/mm (ppi)	10 (57)	WSTM-1229
Electrical - As Cured		
Dielectric Strength, (1mm), kV/mm	23	WSTM-1173
Dielectric Constant, 100 Hz.....	3.0	WSTM-1203
Volume Resistivity, ohm cm	5 x 10 ¹⁵	WSTM-1175

* These times are dependent on construction variables.

Adhesion

SEMICOSIL® 989/1k Transparent shows good adhesion without primer to many substrates used in electronics (metals, glass, ceramics, polyimide, PBTP and other plastics).

For best adhesion remove all mold release agents, processing oils, greases or other contaminants by using a suitable solvent.

We recommend preliminary tests be run to optimize curing schedule.

Curing

For complete cure and, more important, for optimal adhesion, SEMICOSIL® 989/1k Transparent should be cured at temperatures higher than 100°C. We recommend tests be run to determine the optimal cure condition by varying temperature and time.

Inhibition of Cure

Various substances can delay vulcanization or, in extreme cases, prevent it altogether.

The most important of these are:

- sulphur, polysulphides, polysulphones and substances containing sulphur, such as natural synthetic rubbers (e.g. EPDM)
- amines, urethanes and substances containing amines
- organometallic compounds, especially organo-tin (such as condensation-curing RTV-2 silicone rubbers)

Processors are therefore urged to check in advance all materials likely to come in contact with unvulcanized SEMICOSIL® 989/1k Transparent for compatibility. Liquid components, tacky surface of the cured rubber or delayed curing indicate that vulcanization has been inhibited.

Safety and Handling

For specific information regarding safe handling of this material, please refer to the Material Safety Data Sheet.

Storage and Shelf-Life

Shelf-life of SEMICOSIL® 989/1k Transparent is six (6) months from date of shipment provided the product is stored in a dry, tightly sealed, original container below 25°C (77°F).

Ordering Information

SEMICOSIL® 989/1k Transparent Adhesive/Sealant is available in 20 kg (44 lb.) pails. Orders may be placed directly to:

Wacker Silicones Corporation
3301 Sutton Road
Adrian, Michigan 49221-9397
Phone: **1 800 248-0061**
in Michigan: (517) 264-8336

To speak with a technical representative or for information on other Wacker products call toll free **1 800 248-0063**.

Wacker Silicones Corporation is a domestic manufacturer of basic silicone materials for industry. Products include silicone fluids and emulsions, antifoam and release agents, room temperature vulcanizing (RTV) sealants and adhesives, heat curable rubber (HCR), liquid silicone rubber (LSR), masonry water repellents, paint raw materials, paper release coatings, and textile finishes.

Our Representative in Canada:

Henley Chemicals
199 Courtland Ave.
Concord, Ontario Canada L4K 4T2
Toll free 1 800 387-5247
Phone (416) 661-1500
FAX (416) 661-1333

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Quality Management System
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