

# **SNAPSIL\* TN3705**

# silicone adhesive sealant

**ENGINEERED MATERIALS** 







SnapSil TN3705 silicone adhesive sealant is a one-component, low volatile siloxane that cures at room temperature upon exposure to atmospheric moisture, and exhibits primerless adhesion to many substrates.

## **Key Features and Typical Benefits**

- Fast tack-free time
- Low volatility
- Non-corrosive to most metals
- Primerless adhesion to many substrates
- Low odor cure: releases an alcohol vapor during cure

Typical Physical Properties		(JIS K 6249)
Uncured Properties		
Appearance		Flowable, clear, white, black
Viscosity (23 °C)	Pa•s	1.5
Tack-free Time (23 °C)	min	7
Cured Properties (3 days @ 23 °C, 50%RH)		
Appearance		Elastic rubber, clear, white, black
Density (23 °C)	g/cm³	1.01
Hardness (Type A)		13
Tensile Strength	MPa	0.4
Elongation	%	130
Adhesion Strength <sup>(1)</sup>	MPa	0.2
Volatile Siloxane <sup>(2)</sup> (D <sub>3</sub> -D <sub>10</sub> )	wt%	0.01
Volume Resistivity	Ω•cm	2.0x10 <sup>15</sup>
Dielectric Strength	kV/mm	26
Dielectric Constant (60Hz)		2.7
Dissipation Factor (60Hz)		0.002
Impurities <sup>(2)</sup> ppm	Na <sup>+</sup>	<2
	K <sup>+</sup>	<2
	CI <sup>-</sup>	<2

<sup>(1)</sup> Glass lap shear, 7 days @ 23 °C, 50%RH

<sup>(2)</sup> In-house test method

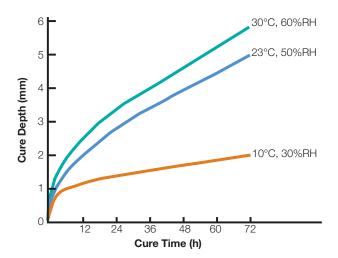
Typical properties are average data and are not to be used as or to develop specifications.

# **Potential Applications**

- Insulating adhesive seal and fixing for electrical and electronic parts
- Waterproof sealant for electrical, electronic and communication equipment
- General adhesive for metal, glass, plastics, etc.

#### **Cure Profile**

SnapSil TN3705 silicone adhesive sealant cures upon exposure to atmospheric moisture, and its cure speed is affected by humidity and temperature. The material begins to cure from the sections that are exposed to the atmosphere and, therefore, greater time is required for the cure to extend to deeper sections. The typical cure depth of SnapSil TN3705 silicone adhesive sealant at various combinations of humidity and temperature are provided below.



#### Adhesion Performance

SnapSil TN3705 silicone adhesive sealant adheres to a wide variety of substrates used in electronic components. The following matrix depicts adhesion performance to typical substrates. However, actual performance may vary depending on the substrate manufacturer or grade.

Substrate		
Aluminum	0	
Copper	0	
Steel	0	
Stainless Steel	0	
Acrylic resin	0	
Phenolic resin	0	
Epoxy resin	0	
PET	0	
ABS	0	
PBT	0	
PPS	0	
PVC	0	
Nylon	0	
Polycarbonate	0	
PPO	0	
Polyethylene	Х	
Polytetrafluoroethylene	Х	
Glass	0	

O:Good (cohesive failure)

# **Packaging**

- 100g tube
- 333ml cartridge
- 18kg pail

X: Adhesive failure

#### SNAPSIL\* TN3705 silicone adhesive sealant

#### **Patent Status**

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

### **Product Safety, Handling and Storage**

Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. MSDS are available at <a href="https://www.momentive.com">www.momentive.com</a> or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

#### Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

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