



## Technical Data Sheet

### DOWSIL™ SE 9186 Black, Clear or White Adhesive

One-part, black, translucent or white, flowable, fast tack-free, controlled volatility adhesive

#### Features & Benefits

- Fast tack-free room temperature cure
- Flowable
- Controlled silicone volatility
- Cures to soft, low stress elastomer
- No added solvents
- No mixing required
- Room temperature cure, no ovens required
- Faster in-line processing at room temperature with option for heat acceleration
- Able to flow, fill or self-leveling after dispensing
- Reduced potential for silicone volatiles

#### Composition

- 1-part, translucent or white
- Polydimethylsiloxane

#### Applications

- Sealing of electronic equipment and modules
- Parts fixing on circuit board
- Sealing against potential stress cracks

### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
One part or Two part		One
Color		Black, Translucent or White
Viscosity	cP Pa-sec	64000 64
Specific Gravity (Cured)		1.03
Tack-Free Time at 25°C	minutes	8
Tensile Strength	Psi MPa kg/cm <sup>2</sup>	360 2.5 25
Elongation	%	550
Adhesion Lap Shear (glass)	Psi MPa N/cm <sup>2</sup>	185 1.3 130

## Typical Properties (Cont.)

Property	Unit	Result
Durometer Shore A		20
Dielectric Strength	volts/mil kV/mm	575 23
Volume Resistivity	ohm*cm	2.0 E+16
Content of Low Molecular Siloxane (D4-D10): Clear version / White version	ppm	35 / 45
Content of Low Molecular Siloxane (D4-D20): Clear version / White version	ppm	230 / 300

## Description

DOWSIL™ brand one-part moisture cure adhesives are generally cured at room temperature and in an environment of 30 to 80 percent relative humidity eliminating the need for curing ovens and the associated costs of energy and capital. Greater than 90 percent of full physical properties should be attained within 24 to 72 hours and varies according to product. Faster manufacturing throughput can be achieved since the adhesive and component can be handled in much shorter times of about 10 to 120 minutes, depending on the adhesive selected and the amount applied. These adhesives are not typically used in highly confined spaces or where a deep section cure is required as they generally cure from the exposed surface inward at a rate of 0.25 inch per seven days. Cure progresses from the outer exposed surface and is dependent on the moisture in the air. Working time is generally a few minutes to an hour for these products until a surface skin begins to form. Mild heat below 60°C (140°F) may be used to increase through-put by accelerating the cure. DOWSIL™ brand silicone adhesives retain their original physical and electrical properties over a broad range of operating conditions which enhance the reliability of and service life of electronic devices. The stable chemistry and versatile processing options of these adhesives offer benefits for a variety of electronics needs from increasing component safety and reliability, reducing total cost or increasing the performance envelope of devices or modules.

## Application Methods

- Simple needle dispensing systems
- Automated systems are normally used for high volume processes
- Manual dispensing for low volumes

## Preparing Surfaces

All surfaces should be thoroughly cleaned and/or degreased with DOWSIL™ brand OS Fluids, naphtha, mineral spirits, methyl ethyl ketone (MEK) or other suitable solvent. Solvents such as acetone or isopropyl alcohol (IPA) do not tend to remove oils well, and any oils remaining on the surface may interfere with adhesion. Light surface abrasion is recommended whenever possible, because it promotes good cleaning and increases the surface area for bonding. A final surface wipe with acetone or IPA is also useful. Some cleaning techniques may provide better results than others; users should determine the best techniques for their particular applications.



## Technical Data Sheet

### DOWSIL™ SE 9186 L Sealant

#### FEATURES & BENEFITS

- Fast, tack-free surface at room temperature
- Flowable
- Cures to soft, low stress elastomer
- Controlled silicone volatility
- No added solvents
- Room temperature cure, no ovens required
- Mild heat can accelerate cure and speed in-line processing
- Soft coating can improve reliability against stress

#### COMPOSITION

- Polydimethylsiloxane

One-part, translucent or black, fast tack-free flowable conformal coating/adhesive with controlled volatility

#### APPLICATIONS

DOWSIL™ SE 9186 L Sealant is used for:

- Rigid and flexible circuit boards
- Spot protection on components

#### TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
One or Two Part		One
Color		Translucent and Black
Viscosity	cP Pa-sec	27000 27
Specific Gravity (Cured)		1.02
Low Molecular Weight Siloxanes (D4-D10) Clear Version / Black Version	ppm	23 / 29
Low Molecular Weight Siloxanes (D4-D20) Clear Version / Black Version	ppm	169 / 233
Tack-Free Time at 25°C	minutes	8
Cure Time (20°C/55% RH/1 mm)	hours	5
Durometer Shore A		25
Tensile Strength	MPa	1.6
Elongation	%	340
Adhesive Strength (Glass)	N/cm <sup>2</sup>	92
Dielectric Strength	Volts/mil kV/mm	575 23
Volume Resistivity	Ohm.cm	6.0E+15
Dielectric Constant at 1 MHz		2.7
Dissipation Factor at 1 MHz		0.001

品牌:	道康宁(陶熙)	道康宁(陶熙)
型号:	SE 9186	SE 9186L
规格:	330 ml/支	330 ml/支
粘度:	64000 cp	27000 cp
比重:	1.03	1.02
硬度:	20 A	25 A
伸长率:	550 %	340 %
表干时间:	8 min	8 min
抗拉强度:	2.5 MPa	1.6 MPa
绝缘强度:	23 Kv/mm	23 Kv/mm
介电常数:	/	2.7 (1 MHz)
耗散系数:	/	0.001 (1 MHz)
体积电阻率:	2.0E+16 ohm*cm	6.0E+15 ohm*cm
粘接强度(玻璃):	130 N/cm <sup>2</sup>	92 N/cm <sup>2</sup>
低分子硅氧烷 (D4-D10)含量:	透明 / 白色 35 / 45 ppm	透明 / 黑色 23 / 29 ppm
低分子硅氧烷 (D4-D20)含量:	透明 / 白色 230 / 300 ppm	透明 / 黑色 169 / 233 ppm
使用温度范围:	-45°C~200°C	-45°C~200°C
储存条件:	0°C~30°C 未开封	≤32°C未开封保存
保质期:	12个月	12个月

# DOWSIL SE 9186 / 9186L

## 产品特点

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### 有机硅胶-高触变性 SE9186

- 单组分，室温湿气固化。
- 高触变性：不垂流，便于成型。
- 脱醇型：固化反应副产物为醇类，对基材无腐蚀。
- 快速表干：提高生产效率。
- 精炼型：小分子含量低，可控制的有机硅挥发性，可直接用于精密元器件上，不会对元器件造成腐蚀。
- 固化后成柔软，低应力的弹性体。
- 不添加溶剂。
- 可以选择加速加热。
- 施胶后能够流动，填充或自流平。

### 有机硅涂层材料-快干低粘度型 SE9186L

- 单组分，室温湿气固化。
- 快速表干：提高生产效率。
- 自流平：便于操作。
- 无腐蚀：不会对基材产生腐蚀。
- 无挥发：不添加溶剂。
- 固化后成柔软，低应力的弹性体。
- 可控制的有机硅挥发性。
- 温和的热量可以加快固化速度并加快在线处理速度。
- 柔软的涂层可以提高抗应力的可靠性。

