

High Strength, Non-Corrosive EMI Shielding Silicone Adhesive

SnapSil* CXE16-0226B

PRELIMINARY DATASHEET

PRODUCT DESCRIPTION

SnapSil* CXE16-0226B is a one component, low volatile siloxane, condensation cure silicone adhesive that cures at room temperature with exposure to atmospheric moisture providing shielding against electromagnetic interferences. Once cured it forms an elastic silicone rubber.

KEY FEATURES

- ◆ Good shielding effectiveness to prevent electromagnetic interferences
- ◆ Good strength and adhesion to many substrates
- ◆ Low cure shrinkage
- ◆ Low volatility
- ◆ Non-corrosive to metals; meets MIL-A-46146B corrosion test

APPLICATIONS

- ◆ Electrically conductive adhesive sealant and fixing for electrical and electronic parts requiring EMC/EMI shielding.
- ◆ Waterproof sealant for electrical, electronic and communication equipment

TYPICAL PROPERTY DATA

(JIS K 6249)

UNCURED PROPERTIES (23°C, 50% RH)		
Appearance		Thixotropic paste, Black
Viscosity	Pas	430
Tack-free Time	min	60
CURED PROPERTIES (7days @ 23°C, 50% RH)		
Appearance		Elastic rubber, Black
Density (23°C)	g/cm ³	1.90
Hardness (Type A)		44
Tensile strength	MPa	2
Elongation	%	140
Volatile siloxane* (D ₃ -D ₁₀)	wt%	0.01
Volume resistivity	Ω·cm	16.7
Lap Shear Adhesion (AI)	MPa	1.5

* In-house test method

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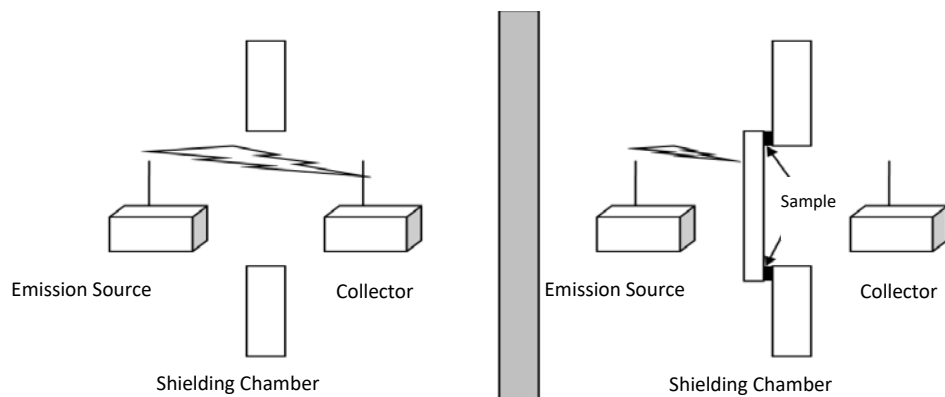
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Shielding Effectiveness (SE)

- 1) The test configuration consists of an in-wall brass test fixture comprised of a 24" x 24" aperture, surrounded by clamps. For this test, a 26" x 26" x 0.375" aluminum test fixture is clamped to the brass fixture using a Monel all mesh EMI/RFI gasket to shield the interface between the two fixtures. The aluminum test fixture has a 12" x 12" aperture lined with the test specimen.
- 2) After initial calibration, a 15.7" x 15.7" x 0.394" thick aluminum test plate is bolted over the 12"x 12" aperture. Spacers are installed beside samples and set a certain compression ratio of the samples.
- 3) For the test bandwidth of 200 MHz to 1 GHz, Log periodic antennas were used. Double ridged waveguide antennas were used from 1 GHz to 10 GHz. Radiated testing was conducted utilizing an N5234A vector network analyzer. Power amplifiers were used to achieve the dynamic test range. Measurements to determine shielding effectiveness (dB) levels were made utilizing a swept frequency technique.
- 4) Equipment: RF shielding room, with test equipment:
 - HD-0210LPA7N Log Periodic Antennas 200MHz - 1000MHz
 - HD-10180DRHA Double Ridged Waveguide Antennas 1GHz - 10GHz
- 5) Specimen preparation:
 - Dispensing section: H2.0mm*W2.6mm / Frame size: 36*36cm
 - c) Specimen quantity
 - Uncured: 1pcs
 - Cured (72H room temperature cure): 1pcs

SE Measurement Principle



$$(\text{Hole Radiation/dBm}) - (\text{Shielding Radiation/dBm}) = (\text{SE/dBm})$$

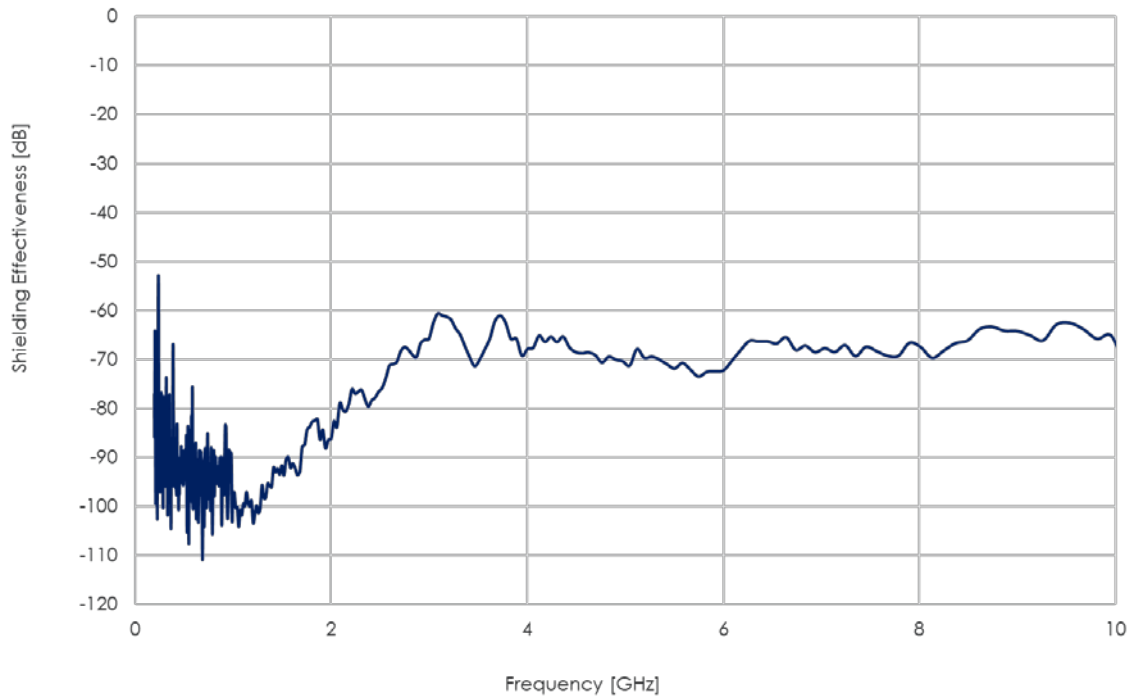
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Shielding Effectiveness (SE)

Measurement Results



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HANDLING AND SAFETY

- ◆ Thoroughly clean the substrate with a suitable solvent and dry completely before applying.
- ◆ Wear eye protection and protective gloves at all times when working with this product.
- ◆ Maintain adequate ventilation in the work place at all times.
- ◆ We recommend that you use all after opening.

STORAGE

- ◆ Store in a cool, dry place out of direct sunlight.
- ◆ Keep out of the reach of children.

The sample provided is a material that is made on an experimental basis, and its specifications are subject to change. Delivery of this sample does not indicate a commitment to commercialize this material. In the event that the material is commercialized, the product name is subject to change.

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