



# 3M™ Sealant SZ1000 for EV Enclosure Sealing

## Technical Data Sheet



### Description

3M™ Sealant SZ1000 for EV Enclosure Sealing is a cure-in-place, flame retardant, foam, sealing solution designed for sealing EV enclosures such as battery packs in EVs and hybrids. This new solution can be dispensed automatically and provides secure sealing against moisture and foreign substances, allows battery pack serviceability and offers good aging durability.

### Product Features and Benefits

- Cure-in-place, and offers a reusable seal to enable battery serviceability
- Enables an automated and robust sealing process for the EV battery case
- Cures at room temperature or at high temperatures
- Meets specification UL94 V0 Flammability
- Meets specification IP68 (>=67) for waterproof
- Offers a better Water Vapor Transmission Rate (WVTR) than foam tapes
- Provides good durability and compression resistance over time

In addition to the product features and benefits, 3M offers a global presence and numerous services including testing, process consulting, and prototyping.

### Physical Properties

	Properties	Test Method
Color	Part A: Black (Accelerator) Part B: White (Base)	Visual
Viscosity, 25°C	Part A: 300K~800K mPa-s Part B: 300K~800K mPa-s	Rheometer
Density	Part A: 0.85~1 g/cm <sup>3</sup> Part B: 0.8~0.95 g/cm <sup>3</sup>	ASTM D1475
Mixing Ratio (Accelerator: Base)	1 : 1	

### Typical Performance Properties

Typical performance of 3M™ Sealant SZ1000 is shown below. These values are for reference only. The following technical information and data is based upon limited 3M testing conditions and should not be used for specification purposes.

Properties	Unit	3M Results	Test Method
Foam Density After Cure	Kg/m <sup>3</sup>	500~700	ASTM D 1056
Tack Free Time at 25°C	Min	15-20	--
Compression Stress at 50% Compression Ratio	KPa	300~400	ASTM D 1056
Compression Set (85°C, 24hr at 50% Compression Ratio)*	%	<15	EN ISO 1856
Recommended Compression Ratio in Service	%	30~50%	N/A
Tensile Strength	MPa	~0.7	ASTM D 412
Tensile Elongation at Break	%	>200	ASTM D 412
Flame Retardant, UL94	--	Pass	UL94 V0
Odor		Odor Free	
Water Proof	Rating	Pass	IP68
Shore A Hardness		15~30	
Water Absorption	%	<1	

- Sealant was cured at RT for 48hours.

### Regulatory Information

Please refer to the product label and Safety Data Sheet (SDS) for health and safety information before using.

### Contact Information

The information provided in this technical document is intended as a guide for these products. For more information or help in selecting a 3M product for an application, please contact your 3M technical service representative or call 1-800-328-1684.

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Patent Pending