



# 3M™ Sealant SZ1000 for EV Enclosure Sealing

## Technical Data Sheet

### Description

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

The product features:

- Cure-in-place, and offers a resealable gasket to enable battery serviceability
- Enables an automated and robust sealing process for the EV battery case
- Cures at room temperature or at high temperatures
- Flame retardant
- Meets specification IPX8 for water protection
- 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 material-level testing, process consulting, and sampling of products.

### Typical Properties

	Properties		Test Method
	Part A	Part B	
Color	Black	White	Visual
Viscosity, 25°C	300~800 Pa·s	300~800 Pa·s*	3M Test Method
Density	0.85~1 g/cm <sup>3</sup>	0.8~0.95 g/cm <sup>3</sup>	ASTM D1475
Mixing Ratio	1 : 1		

\* Viscosity increases over time which is normal for this product. Customers should adjust their dispensing parameters accordingly.

### 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**	g/cm <sup>3</sup>	0.5 – 0.7	ASTM D1056
Tack Free Time at 25°C	Min	8-20	3M Test Method
Compression Set (85°C, 24hr at 50% Compression Ratio)***	%	<15	EN ISO 1856
Recommended Compression Ratio in Service	%	30~50%	N/A
Flame Retardant	--	Pass	UL94 V0
Water Protection	Rating	IPX8	IEC 60529
Water Absorption (2 hour immersion time)	%	<1%	ASTM D570

\*\*Data range obtained with specific dispensing parameters and can vary depending on the sealant dispensing environment and equipment used

\*\*\*Sealant was cured at room temperature for 48 hours.

## Shelf Life Statement

Both Part A and Part B materials should be used within twelve (12) months from manufacturing date. It is recommended that products with an expired shelf life be discarded. Material should be stored in unopened drums at standard ambient conditions (23°C).

## Regulatory Information

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

## 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.

**Intended Use:** These products are intended for use in general battery enclosure sealing in automotive, off-highway, industrial and marine applications. Since there are many factors that can affect a product's use, the customer remains responsible for determining whether the 3M product is suitable and appropriate for the customer's specific application and system, including customer conducting an appropriate risk assessment and evaluating the 3M product in customer's application and system.

**Restricted Use:** 3M advises against the use of this 3M product in any application other than the stated intended use(s), since other applications have not been evaluated by 3M and may result in an unsafe or unintended condition.

**Technical Information:** The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

**Product Selection and Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment, reviewing all applicable regulations and standards, and reviewing the product label and use instructions. Failure to properly evaluate, select, and use a 3M product in accordance with instructions or to meet all applicable safety regulations may result in injury, sickness, death, and/or harm to property. **Warranty, Limited Remedy, and Disclaimer:** Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:** Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

