

3M™ Sealant SZ1000 for EV Enclosure Sealing

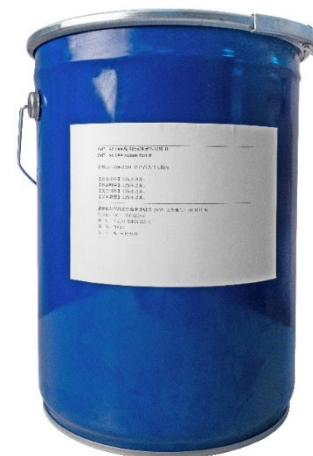
Technical Data Sheet

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.

Physical 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 ³ | 0.8~0.95 g/cm ³ | 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 ³ | 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.

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