

SILTRUST™ SLE5700 Elastomeric Coating

Product Description

SILTRUST SLE5700-D1 is a liquid, two-component silicone elastomer which can be cured within 1-2 minutes at 160°C. This product is mixed in a 1:1 ratio by weight with the resultant blended viscosity of 20 000 mPa·s, which is suitable for applications in the textile industry. SLE5700-D1 can be used to enhance the physical strength of engineered textiles while providing durable anti-blocking characteristics.

Key Features and Typical Benefits

- Fast cure to tough elastomeric coating
- Pourable consistency
- Solventless application
- Enhances fabric strength and durability

Typical Physical Properties

| Uncured Properties | SLE5700-D1 |
|--|-------------|
| Consistency | Flowable |
| Color | Translucent |
| Viscosity (A + B) [mPa sec] | 20,000 |
| Catalyzed Viscosity @ 25°C after 6 hours [mPa sec] | 250,000 |
| Specific Gravity | 1.01 |
| Work Life @ 25°C [hrs] | 48 |
| Cured Properties ⁽¹⁾ | |
| Mechanical: | |
| Tensile Strength, [MPa] | > 5.0 |
| Percent Elongation | > 200 |
| Hardness, Shore A | 40 |

Typical properties are average data and are not to be used as or to develop product specifications.

(1) Information is provided for customer convenience. These properties are not tested on a routine basis.

General Considerations for Use

Processing Recommendations

Compatibility

SLE5700-D1 will typically cure when applied to a clean, dry surface, which has been properly prepared. Certain materials such as butyl and chlorinated rubber, sulfur-containing materials, amines and certain metal soap-cured RTV silicone rubber compounds can cause cure inhibition. Cure inhibition is characterized by a gummy appearance of the silicone at the interface between it and the substrate. Inhibition will result in failure of the elastomer to reach the desired physical property specifications and may reduce the adhesion of the silicone to the fabric. Certain fabric treatments may hinder the cure of the silicone elastomer; therefore, it is recommended that a sample patch test be performed with the SLE product to determine if a barrier coating or other inhibition-preventing measure is required.

Mixing

Stir both A and B components thoroughly with clean tools before mixing. This can be done by utilizing a batch power mixer or by using an agitator suitable for insertion directly into the shipping container. Add equal parts of A and B components, by weight, and continue stirring for several minutes until well mixed. Care should be taken to minimize air entrapment during mixing as this may cause voids in the cured product. When mixing it is also important to control batch temperature so as not to overheat the mixture, which would result in a shorter pot life. Expose the mixed material to a vacuum of 10-20 mbar for several minutes. The material will expand, crest, and recede to about the original level. Automatic equipment designed to meter, mix, deaerate, and dispense a two component silicone elastomer will add convenience to continuous large-scale operations. Once blended together the silicone will have a room temperature pot life of approximately 48 hours.

Application

Fabric substrates should be preheated at cure temperature to remove entrapped air before the SLE is coated on the material. SLE5700-D1 can be applied in low coat weights of 40g/m² by standard fabric coating techniques of knife over roll, knife over table and gap table application.

Curing

Knife coated applications where the silicone penetrates deeply into the fabric can be cured within 1-2 minutes at 160°C. Application techniques that apply greater coating thickness will decrease the rate of heat transfer and will therefore require a longer cure time.

Packaging and Dispensing

SLE5700-D1 is available in 36.3 kg pail kits and 362.9 kg drum kits.

Clean Up and Removal

Before curing, solvent systems such as naphtha or methyl ethyl ketone (MEK) are most effective. Refer to solvent use warnings in the section on surface preparation. After cure, selected chemical strippers which will remove the silicone rubber are available from the other manufacturers.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement, or recommendation to practice any invention covered by any patent without authority from the owner of the patent.

Product Safety, Handling, and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment, if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock

emergency service for its products. SDS are available at www.momentive.com or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular application(s).

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