Technical Data Sheet

SilForce™ SL3832 Thermal Solventless System

Description

SilForce SL3832 is an addition cross-linking, solvent-free branched polydimethyl siloxane bearing vinyl groups. SilForce SL3832 cures to give high-quality films at low temperature, provided that heat is transferred rapidily by the drying system. This coating system is specifically designed to give low release levels against aggressive adhesives.
The rapid, non-blocking coating obtained with SilForce SL3832 makes the coated paper/film easy and economical to handle.

Key Features and Typical Benefits

- Low release properties
- Safe handling during application
- Uniform film formation
- Universal suitability on all silicone base papers and plastic films
- Low curing temperatures
- Minimal drying-out of the paper
- Excellent surface smoothness
- Low coating weight
- Moderate pot life

Product References

- SilForce SL3832 Thermal Solventless System – Easy Release Polymer pre-blend containing inhibitor
- SilForce PC 3 Catalyst – Platinum Catalyst Concentrate

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- SilForce H 10 Curing Agent – Cross-linker

Specifications

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting Momentive Performance Materials.

FDA/BfR status

The SilForce SL3832 system complies with BfR as well as FDA regulations 177.2600.

Typical Physical Properties

Table 1: SilForce SL3832 Properties

Property	Property
Viscosity, cstks, 25 °C	200-300
Density, g/ml, 25 °C	0.97
Color	Colorless

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

Containers

1 kg sample
25 kg pail
200 kg drum
950 kg container

General Instructions for Use

Table 2: Suggested Starting Formulations

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Component	80 ppm Pt	100 ppm Pt
SilForce SL3832 thermal solventless system	90.2	88.8
SilForce H 10 curing agent	3.6	3.5
SilForce PC 3 catalyst	6.2	7.7

Important Note:

- The suggested starting formulations in Table 2 are based on cure optimization. Destabilized release may occur with some adhesives, acrylics types in particular, at the suggested cross-linker levels. Please contact a Momentive Performance Materials Technical Service Representative for further information and guidance.
- By varying the quantity of the platinum catalyst SilForce PC 3, a wide range of cross-linking speeds can be achieved, which can then be adjusted to suit the machine. The guide formulations have a pot life in excess of 3.5 hours. Adding of more platinum catalyst SilForce PC 3 increases the cross-linking rate, but reduces the pot life.
- Other cross-linkers are available from Momentive Performance Materials portfolio.

Bath Preparation

To ensure consistent results and maximize bath life, components should be mixed in the following order:
1. Weigh and add base polymer and cross-linker (SilForce SL3832 and SilForce H 10) to a clean, rust-free container/mixing vessel.
2. Agitate thoroughly.
3. Weigh and add the catalyst (SilForce PC 3) to above mix.
4. Agitate thoroughly for 10-15 minutes to ensure homogeneity.

Bath should be prepared just prior to use.

Coating Weight / Substrates

SilForce SL3832 gives high-quality films of 1 g/m^2 or less on silicone base papers and plastic films with low release forces with normally used coating machines with 3 to 5 rollers.

Caution

As the platinum catalyst SilForce PC 3 is sensitive to certain “toxins”, care must be taken to ensure that neither the individual components nor the ready-to-use

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formulations come into contact with such substances.
Typical catalyst toxins include:

- Heavy metal compounds (e. g. tin compounds)
- Isocyanates
- Sulphur compounds (e. g. thiols, sulphides, sulphites)
- Nitrogen compounds (e. g. amines, amides, amine-cured plastics)

As, for example, sulphur compounds occur in rubber blends, only well conditioned rubber rollers (e.g. made from butyl rubber) should be used in the application units. Likewise, the effect of amine-cured plastics on the catalyst must also be considered critically. These compounds may also have an effect on the pre-treatment of the silicone base papers and films.

Availability

All components of the SilForce SL3832 system may be ordered from Momentive Performance Materials Sales office nearest you or an authorized Momentive Performance Materials product distributor.

Classification, Toxicity, Precautions

The SilForce H 10 cross-linker will generate flammable hydrogen gas upon contact with strong acids, bases or oxidizing agents. Do not reuse the container.

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

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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 applications.

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