

## SilForce™ SL6562 Solventless Coating

### Product Description

SilForce SL6562 thermal solventless release coating may be considered for use on glassine and PE coated kraft papers, where the cost saving may be most significant. Nevertheless, it can also be considered for use on kraft and SCK papers as well as on PET films by adjusting the level of catalyst accordingly and selecting the right cross-linker. In combination with Anchorsil\* 2000 adhesion promoter, this thermal solventless system may be considered for use on untreated PET films. SilForce SL6562 solventless coating gives a flat release profile (see chart attached here below). This unique property typically allows the product to run successfully on high speed dispensing machines (without breaking the matrix).

### Product References

SilForce SL6562 Base polymer

SilForce SL6031 Controlled Release Additive(1)

SilForce SL4380 Cross-linker for papers and films(2)

SilForce SL6210 Platinum catalyst concentrate

(1) Other CRA's may be considered for this base polymer (please contact technical expert from Momentive for advice)

(2) Depending on the substrate and/or the processing conditions other cross-linkers can be used

### Key Features and Typical Benefits

- New technology for lower temp. curing system
- Flat release profile (for fast dispensing line)
- Versatile system for release liners (Papers & Films)
- Productivity gain in terms of machine capacity & energy

- High formulation flexibility

### Potential Applications

SilForce SL6562 solventless release coating is compositionally compliant with FDA regulations 21 CFR: 175.320 (Resinous and polymeric coatings for polyolefin films); 176.170 (Components of paper and paperboard in contact with aqueous and fatty foods); and 176.180 (components of paper and paperboard in contact with dry foods). The end user has sole responsibility for determining that its product complies with all applicable FDA specifications and limitations and is fit for food contact use.

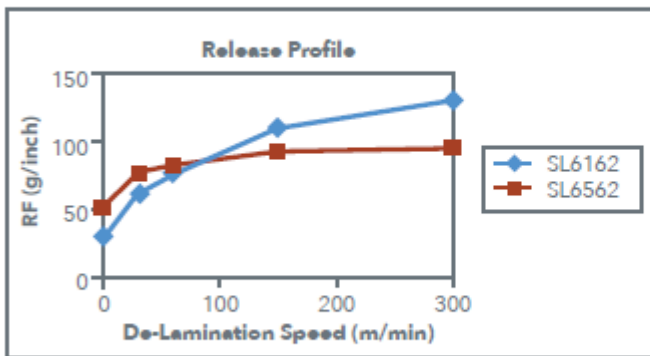
### Typical Physical Properties

| Property             | SilForce SL6562 | SilForce SL6031 |
|----------------------|-----------------|-----------------|
| Viscosity, ctk, 25°C | 220 - 350       | 1500 - 2700     |
| Density, kg/l        | 1.00            | 1.04            |

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

**Graph 1**

The SL6562 base polymer can provide a flat release profile, as shown in Graph 1.



Note: Test data. Actual results may vary.

### General Considerations for Use

This solventless release coating system can be applied by many of the methods now being used commercially for solventless silicone. These include three rolls differential offset gravure and various multiple smooth rolls configurations. Heat should be applied immediately after coating to initiate cure. Best results are obtained with zoned ovens. Operating the first oven zone at 90-120 °C will allow the coating to level, forming a continuous film before cure is initiated. Subsequent oven zones should be sufficiently

high to achieve the required web exit temperature. Actual temperatures required for complete cure will be highly dependent on the performance of the oven and machine conditions. In general, minimum web temperature must be maintained for a finite time (= dwell time) to obtain complete cure, with the time being dependent on oven length and the line speed.

**Typical starting formulations for glassine papers at a catalyst level of 40 ppm**

| Component       | 0% CRA | 5% CRA |
|-----------------|--------|--------|
| SilForce SL6562 | 96     | 91     |
| SilForce SL6031 | -      | 5      |
| SilForce SL4380 | 8.0    | 8.1    |
| SilForce SL6210 | 4      | 4      |

**Typical starting formulation for PET films at a catalyst level of 70 ppm**

| Component       | 0% CRA | 5% CRA |
|-----------------|--------|--------|
| SilForce SL6562 | 93     | 88     |
| SilForce SL6031 | -      | 5      |
| SilForce SL4380 | 8.3    | 8.4    |
| SilForce SL6210 | 7      | 7      |
| AnchorSil* 2000 | 3      | 3      |

**Important Note:**

The suggested starting formulation in the table is based on cure optimization. Destabilized (high) release may occur with some adhesives, solution acrylics in particular, at the suggested cross-linker levels. Please contact a Momentive Performance Materials Technical Service Representative for further information and guidance.

**Bath Life**

The working life of an activated bath will vary depending on ambient conditions. In general, the suggested formulation in the table will have a minimum bath life of 4 hours.

The thin film bath life of the SilForce SL6562 system is significantly shorter than the thin film bath life of the SilForce SL6600, SilForce SL6625 etc. systems.

At high catalyst level (more than 80 ppm Platinum) bath life can be shorter .

## **Bath Preparation**

To ensure consistent results and maximize bath life, components should be mixed in the following order:

1. Weigh and add SilForce SL6562 base polymer to a clean, rust-free container/mixing vessel
2. Weigh and add the Controlled Release Additive (CRA) (SilForce SL6031 CRA for example) if needed into the recipe
3. Agitate thoroughly
4. Weigh and add the cross-linker (SilForce SL4380 cross-linker) to the above material
5. Agitate thoroughly
6. Weigh and add the platinum concentrate (SilForce SL6210 concentrated catalyst) to above mix
7. Agitate thoroughly for 10-15 minutes to ensure homogeneity

Bath should be prepared just prior to use.

## **Coating Weight/Substrates**

The optimal coat weight will depend on the hold out and resolution of the surface, but generally 0.8-1.6 g/m<sup>2</sup> will provide a continuous silicone film.

Coat weights can be determined by X-Ray Fluorescence. For machine trials, a simple method to calculate coat weight is available from Momentive Performance Materials.

## **Current Available Packaging**

1 kg sample

18 kg pail

180 kg drum

950 kg tote

## **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](http://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 applications.

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For literature and technical assistance, visit our website at: [www.momentive.com](http://www.momentive.com)

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