Technical Data Sheet

SilForce™ SL6962 Solventless Coating

Product Description

SilForce SL6962 thermal solventless release coating is an excellent candidate to consider for Glassine papers as well as for filmic liners. This polymer provides a flat release profile and fast cure at a low level of catalyst; e.g.: 40 ppm or even lower on Glassine paper under standard processing conditions. The low viscosity of this vinyl polymer can enable the reduction of silicone coat weight while maintaining good silicone coverage for stable release performance. This polymer can be considered for use on fast labelling dispensing machines that require a flat release profile in order to assure a smooth process at high line speed.

Product References

SilForce SL6962 Base polymer

SilForce SL6031 Controlled Release Additive(1)

SilForce SL4380 Cross-linker for papers(2)

SilForce SL6210 Concentrated catalyst (PT)

(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-linker can be used

Key Features and Typical Benefits

- Flat release profile (for fast dispensing labeling lines)
- New technology allowing low level of catalyst
- Versatile system for paper and filmic substrates (e.g. Glassine and BOPP)
- High formulation flexibility
- Enhanced cross-linkers for good anchorage of the release coating
- Potential productivity gain in terms of machine capacity & energy

Potential Applications

SilForce SL6962 solventless 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.

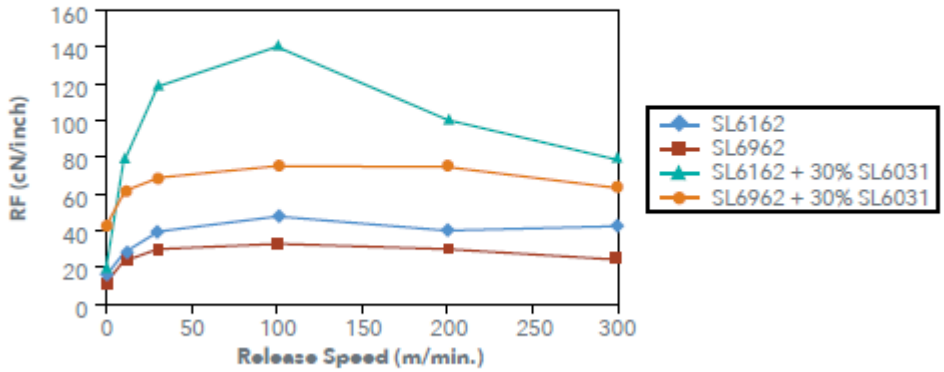
Typical Physical Properties

Property	SilForce SL6962	SilForce SL6031
Viscosity, mPa•s, 25ºC	100 - 160	1500 - 2700
Density, kg/l	0.99	1.04

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

Typical Release Profile

Finat #4 ageing @ RT for 24h
Laminated with Tesa 7475



Note: Test data. Actual results may vary.

General Considerations for Use

The solventless release coating system can be applied by many of the methods now being used commercially for solventless silicone. These include three roll differential offset gravure and various multiple smooth roll configurations. Heat should be applied immediately after coating to initiate cure. Best results are obtained with zoned ovens. Operating the first oven zone at 90-150 °C will allow the coating to level, forming a continuous film before cure is initiated. Subsequent oven zones should be sufficiently high in temperature 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, such 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	10% CRA	20% CRA
SilForce SL6962	96	86	76
SilForce SL6031	-	10	20
SilForce SL4380	6.1	6.51	6.94
SilForce SL6210	4	4	4

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

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 under normal processing conditions.

The thin film bath life of the SilForce SL6962 system is significantly shorter than the thin film bath life of the SilForce SL6600 and SilForce SL6625 systems, therefore we recommend to have a “proper cleaning” of the coating head if the machine is stopped for more than 20 minutes.

At high catalyst level (more than 80 ppm Platinum) bath life with the SL6962 system 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 SL6962 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 of the surface, but generally 0.8-1.4 g/m2 will provide a continuous silicone film.

Coat weights can be determined by X-Ray Fluorescence.

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 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.

Contact Information

Email
commercial.services@momentive.com

Telephone

Americas	**Latin America**	**EMEAI- Europe, Middle East, Africa & India**	**ASIA PACIFIC**
+1 800 295 2392 Toll free* +704 805 6946 Direct Number	**Brazil** +55 11 4534 9650 Direct Number	**Europe** +390510924300 Direct number	**China** 800 820 0202 Toll free +86 21 3860 4892 Direct number
*All American countries	**Mexico** +52 55 2169 7670 Direct Number	**India, Middle East & Africa** + 91 44 71212207 Direct number* ***All Middle Eastern countries, Africa, India,**	**Japan** +81 3 5544 3111 Direct number **Korea** +82 2 6201 4600

For literature and technical assistance, visit our website at: www.momentive.com

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