Technical Data Sheet

SilForce™ SL6310 Thermal Solventless System – Catalyst

Description

SilForce SL6310 is a Pt-concentrate that can be used with our thermal solventless systems like SilForce SL6161, SL6961 or SL7061 as a Pt source. The SilForce SL6310 can also be used in combination with SilForce SL6600, SL6625 or other solventless pre-blends to increase the Pt-level. The SilForce SL6161, SL6961 or SL7061 system can improve the productivity, mainly on glassine and PE coated papers.

Product References

SilForce SL6161 Base polymer with inhibitor
SilForce SL4320 Cross-linker for filmic substrates
SilForce SL6310 Platinum catalyst concentrate

Key Features and Typical Benefits

SilForce SL6310

- SilForce SL6310: Concentrated catalyst outside of the pre-blends

SilForce SL6161-system: Base polymer pre-blend

- Versatile system for all release liners (papers & films)
- New technology suitable for lower temperature curing
- New generation of inhibitor for fast system
- High flexibility in terms of formulations

- Enhanced cross-linkers available for good anchorage of the release coating on several substrates
- Productivity gain in terms of machine capacity

Typical Physical Properties

Property	Value
Viscosity, cps, 25 °C	180 - 300
Density, g/ml	ca. 0.97

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

Potential Applications

SilForce SL6310 used in combination with the SilForce SL6161 and a cross-linker can be applied by any of the methods now being used commercially for solventless (and solvent based) silicone release coatings. 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 95-115 °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 a finite time (= dwell time) to obtain complete cure the time being dependent on oven length and the line speed.

General Considerations for Use
Typical Storage Formulation
Important Note:

The suggested starting formulation in the tables 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 Representative for further information and guidance.

Table 1: Typical starting formulations for glassine papers at a catalyst level of 50 ppm

Component	0% CRA	5% CRA	10% CRA
SilForce SL6161	99	94	89
SilForce SL6031	-	5	10
SilForce SL4320	3.5	3.8	4.1
SilForce SL6310	1	1	1

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 SilForce SL6161 system is significantly shorter than the thin film life of the SilForce SL6600, SilForce SL6625 etc. systems.

Bath Preparation

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

1. Weigh and add SilForce SL6161 to a clean, rust-free container/mixing vessel
2. Weigh and add the cross-linker (SilForce SL4320) to the above material
3. Agitate thoroughly
4. Weigh and add the platinum concentrate (SilForce SL6310) to above mix
5. Agitate thoroughly for 10-15 minutes to ensure homogeneity

Bath should be prepared just prior to use.

Coating Weight/Substrates

SilForce SL6310 used in combination with the SilForce SL6161 and SL6600(E) systems is suitable for a variety of papers. These include supercalendered kraft, glassine, clay coated kraft, etc. The optimal coat weight will depend on the hold out and resolution of the surface, but generally 0.8-1.6 g/m2 will provide a continuous silicone film. Coat weights can be determined by X-Ray Fluorescence. For machine trials, a simple, inexpensive method to calculate coat weight is available from Momentive

Performance Materials.

FDA Status

SilForce SL6310 used in combination with the SilForce SL6161 systems comply with FDA regulations 175.105, adhesives, 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.

Availability

The SilForce SL6310 system may be ordered from Momentive Performance Materials Sales office nearest you or an authorized Momentive Performance Materials product distributor.

Containers

5 kg pail
25 kg pail

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.

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