

SilForce™ SL6210 Release Coating

Description

SilForce SL6210 release coating is a Pt-concentrate that can be used with our thermal solventless system like SilForce SL6161, SilForce SL6961, etc., as a Pt source. SilForce SL6210 release coating can also be used in combination with SilForce SL6600E or other solventless pre-blend to increase the Pt-level. The SilForce SL6161 release coating system can improve the productivity, mainly on glassine and PE coated papers.

Key Performance Properties

- Versatile system for all release liner (paper & films)
- New technology suitable for lower temperature curing
- New generation of inhibitor for fast system
- High flexibility in terms of formulations hold on phone
- Enhanced cross-linker for good anchorage of the release coating
- Productivity gain in terms of machine capacity

Applications

SilForce SL6210 release coating used in combination with SilForce SL6161 or SilForce SL6600E (for example) and a cross-linker can be applied by any of the methods now being used commercially for solventless (and solvent based) silicone release coating. 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 a finite time(=dwell time) to obtain complete cure, the time dependent on oven length and the line speed.

Instruction for Use

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

Components	0% CRA	5% CRA	10% CRA
SilForce SL6161	95	90	85
SilForce SL6031		5	10
SilForce SL4330	3.3	3.6	3.9
SilForce SL6210	5	5	5

Table 2 Typical starting formulations for PET films at a catalyst level of 100ppm

Components	0% CRA	5% CRA	10% CRA
SilForce SL6600E	97.8	92.8	87.8
SilForce SL6630		5	10
SilForce SS4300(C/E)	2.9	3.1	3.3
SilForce SL6210	2.2	2.2	2.2
Anchorsil 2000	3	3	3

Important Note:

The suggested starting formulations in Table 1 and 2 are based on cure optimization. Destabilized(high) release may occur with some adhesive, solution acrylic in particular, at the suggested crossliner levels. Pls contact a Momentive Technical Service Representative for further information and guidance.

Bath Life:

The working life of an activated bath will vary depending on catalyst and inhibitors levels as well as ambient conditions. In general the suggested formulatios in Table 1 and 2 will have a minimum bath life of 8 hours.

The thin film bath life of the SilForce SL6161 system is signifacantly shorter than the thin film bath life of the SilForce SL6600E, SilForce SL6625, and SilForce SL6425 system.

Bath Preparation

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

- 1: Weigh and add polymers (SilForce SL6161/SilForce SL6031 or SilForce SL6600E/SilForce SL6630) to a clean, rust-free container/mixing vessel
- 2: Weigh and add crossliner (SilForce SL4330) to above mix
- 3: Agitate thoroughly
- 4: Weigh and add the platinum concentrate (SilForce SL6210) to above mix
- 5: Agitate thoroughly
- 6: Weigh and add the Anchorsil2000 to above mix (when needed)
- 7: Agitate thoroughly for 10-15mins to ensure homogeneity

Bath should be prepared just prior to use

Coating Weight/Substrate

SilForce SL6210 release coating used in combination with the SilForce SL6161 and SilForce SL6600E systems is suitable for a variety of papers. These include supercalendered kraft, glassine, clay coated kraft, etc. Coat weight will depend on the hold out and resolution of the surface. but generally 0.8~1.6g/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 is available from Momentive.

Specifications

Typical product data values should not be used as specifications. Assistance and specifications are available at the technical service department of Momentive.

FDA status

SilForce SL6210 used in combination with the SilForce SL6161 and SilForce SL6600E system comply with FDA regulations 175.105, adhesive, 175.320, resinous and polymeric 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.

Containers

18kg pail
180kg drum

Patent Status

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Product Safety, Handling and Storage

Correctly stored in its original, unopened container at 25°C or below SilForce SL6210 has a shelf life of 720** days from the date of manufacturing. **Please see also use-before/expiry date on product label and certificate.

SilForce SL4330 and other cross-linker used in combination with SilForce SL6210 will generate flammable hydrogen gas upon contact with strong acids, bases or oxidizing agents. Do not reuse the container.

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Limitations

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

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