

Silicones for Release Coatings



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Silicones are widely used as release coatings in the release liner industry. Momentive Performance Materials is a global supplier of a full portfolio of release coating technologies for label and tape manufacturing. Our customers are supported by dedicated sales and technical service teams around the world.

Chosen for a wide variety of applications, release coating technologies from Momentive include:

- Thermally-cured solventless coatings
- UV-cured solventless coatings
- Water-based coatings
- Solvent-based coatings

Thermally-Cured Solventless (100% solids)	Thermally-Cured Solvent-Based
<ul style="list-style-type: none"> • Stable aged release from most PSAs • Fast cure at low temperatures • Can be considered for filmic and paper substrates • Can be considered for acrylic, hot melt, rubber-based and urethane PSAs • Cure with virtually no by-products and low VOCs • Differential release can be achieved with Controlled Release Polymer (CRP) 	<ul style="list-style-type: none"> • Clear appearance and good anchorage on filmic substrates • Allows for low coat weight due to its specific chemical structure and features • Can be considered for inexpensive paper substrates due to high molecular weight • Can be applied using simple, often inexpensive equipment • Low coefficient of friction
Cationic UV-Cured Solventless	Water-Based
<ul style="list-style-type: none"> • Typically cost effective process and capital investment • Processing on flexographic equipment for narrow web application and multi-roll coating head • Mainly for filmic liners but may be considered for paper liners as well • Efficient CRP for high release force • Fast, low-temperature cure with UV radiation • No inerting needed during release coating application 	<ul style="list-style-type: none"> • Can be applied using solvent-based release coating equipment (gravure roll, air knife, mayer bar, etc.) • Readily accepts thickeners for performance enhancement and economy of use • Can be considered for use on inexpensive substrates including machine-finished or machine-glazed paper



*SilForce, AnchorSil, Tospearl and SLAM are trademarks of Momentive Performance Materials Inc.

Silicones for Release Coatings Products

Classification	Grades	Product Description	Viscosity (25°C) mPa.s	Solids Content %	Release Force	Platinum Level	Key Features
Thermally-Cured Solvent-Based	SilForce* SS6800 release coating	Base Polymer	15,000	30	Light	Low	Fast curing, low temperature curing, light release, low migration
	SilForce XS56-C4880 release coating	Base Polymer	13,000	30	Light	Low	Light release and anti-exposure, two components, low migration
	SilForce XS56-C4617 release coating	Base Polymer	15,000	30	Light to Medium	Low	Anti-exposure, two components, low migration
	SilForce XS56-C4434 release coating	Base Polymer	15,000	30	Medium	Low	Anti-exposure, two components, low migration
	SilForce TPR6700N release coating	Base Polymer	15,000	30	Medium	Medium	Two components, general purpose, low migration
	SilForce XS56-C0548 release coating	Base Polymer	15,000	55	Medium	Medium	High solids content, two components, low migration
	SilForce TPR6712 release coating	Base Polymer	15,000	30	Medium	Medium	Two components, general purpose, low migration
	SilForce SS4331 release coating	Base Polymer	12,000	30	Premium	Medium	Fast curing Pt cured, general purpose for paper and film liners, low migration, low CoF
	SilForce SS4191A release coating	Base Polymer	14,000	30	Light	-	Tin-based, for use on most substrates, slow curing speed, medium level of migration
	SilForce XSR7029A release coating	Controlled Release Polymer	17,000	30	Very High	Medium	Stable release force, can be used separately, low migration
Thermally-Cured Solventless	SilForce SL6062 release coating	Base Polymer	400	100	Light to Medium	Low to Medium	Low release force, high viscosity, ideally consider for hygienic on Kraft paper
	SilForce SL3842 release coating	Base Polymer	250	100	Premium	Low to Medium	Low temperature curing system, compatible with very aggressive PSAs, can be used in compliance with applicable FDA regulations (21 CFR 175.320), some migration, consider for film liners
	SilForce SL3932 release coating	Base Polymer	300	100	Premium	Medium	Premium low release, Fast cure, Pt content adjustable, cross-linker pre-blended
	SilForce SL7061 release coating	Base Polymer	280	100	Premium	Low	Low temperature curing system with premium low and flat release force, excellent anchorage on polyolefins, low migration
	SilForce SL6161 release coating	Base Polymer	250	100	Light	Medium	Fast cure, Pt content adjustable, low migration, dynamic release profile
	SilForce SL6162 release coating	Base Polymer	250	100	Light	Low	Fast curing, Pt content adjustable, low migration
	SilForce SL6961 release coating	Base Polymer	130	100	Medium	Low to Medium	Fast curing, flat RF profile, Pt content adjustable, low migration
	SilForce SL6962 release coating	Base Polymer	130	100	Medium	Low	Fast curing, flat RF profile, low Pt consumption, low temperature cure, low migration
	SilForce SL6561 release coating	Base Polymer	300	100	Medium	Medium	Most flat RF profile, Pt content adjustable, low migration
	SilForce SL6562 release coating	Base Polymer	300	100	Medium	Low to Medium	Most flat RF profile, Pt content adjustable, faster curing, low migration
	SilForce SL5132 release coating	Controlled Release Polymer	3,000	100	Very High	Medium to High	Controlled Release Polymer for thermal solventless system, high efficiency, fast curing, low smoking and improved foaming control
	SilForce SL6031 release coating	Controlled Release Polymer	2,100	100	High	Medium to High	Controlled Release Polymer for solvent-based system and solventless system, stable release force, inhibitor included
	SilForce SL8030 release coating	Controlled Release Polymer	1,500	100	High	Medium to High	Formulated without alpha-olefin, Controlled Release Polymer for solvent-based systems and solventless systems, linear response, high efficiency, only for label
	SilForce SL5030 release coating	Controlled Release Polymer	500	100	Very High	Medium to High	Controlled Release Polymer for thermal solventless and solvent systems, high efficiency, fast curing, easy processability

Note: All products can be considered for use on both paper and film. For filmic liner, refer to related product data sheet or contact with Momentive to choose proper anchorage promoter and proper formula. Above table does not include entire product portfolio. Visit www.momentive.com or contact Momentive for more product information. For detailed test conditions, please refer to related product data sheets.

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



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Silicones for Release Coatings Products (continued)

Classification	Grades	Product Description	Viscosity (25°C) cp	Solids Content %	Release Force	Platinum Level	Key Features
Cationic UV-Cured Solventless	SilForce* UV9700 release coating	Base Polymer	6,000	100	Premium	-	High viscosity epoxy polymer for open substrates and filmic liners for bitumen applications, medium-low migration
	SilForce UV9600 release coating	Base Polymer	400	100	Light	-	Premium release value, especially with aggressive adhesive; low migration
	SilForce UV9300 release coating	Base Polymer	300	100	Light	-	General use, medium-low release value, low migration
	SilForce UV9400 release coating	Base Polymer	225	100	Medium	-	Medium release force, complete and fast curing, low migration
	SilForce UV9315 release coating	Base Polymer	240	100	Medium	-	Medium release force, complete and fast curing, low migration
	SilForce UV9390C release coating	Photoinitiator	Min. 100	55	-	-	UV cationic photoinitiator for epoxy polymers
	SilForce UV9387C release coating	Photoinitiator	Min. 100	55	-	-	UV cationic photoinitiator for epoxy resins, polymers and inks
	SilForce UV9388C release coating	Photoinitiator	powder	100	-	-	Heavy metal-free UV cationic photoinitiator for epoxy resins and polymers. No release of benzene during process
	SilForce UV9440E release coating	Controlled Release Polymer (Light)	1,000	100	Low	-	Controlled Release Polymer for UV cured system, low release force and COF/zip reducer
	SilForce UV9430 release coating	Controlled Release Polymer	500	100	High	-	Controlled Release Polymer for UV cured system, high release force agent
Water-Based Solventless	SilForce SM3628 release coating	Base Polymer	50	40	Light	Medium	Designed for bakery paper, Kosher approved medium migration
	SilForce SM3300E release coating	Base Polymer	5,000 max.	40	Light to Medium	Low to Medium	Compliant with following FDA regulations 21 CFR: 175.105, 175.300, 176.170, and 176.180; Kosher approved; for label, envelope, bakery paper; low migration
	SilForce SM3030 release coating	Controlled Release Polymer	5,000 max.	40	High	Medium to High	Controlled Release Polymer for water based release coating systems
	SilForce SM2800 release coating	Base Polymer	5,000 max.	40	Light to Medium	Low to Medium	Base polymer designed for label and envelope liners, low migration
Anchorage Additives	AnchorSil* 1000 release coating	Thermal-Cured Anchorage Promoter	10~15	100	-	-	Can enhance anchorage on PET film, consider for thermal solventless and solvent based systems; both corona and non-corona treated PET films
	AnchorSil 2000 release coating	Thermal-Cured Anchorage Promoter	215	100	-	-	Can enhance anchorage on PET film, consider for thermal solventless release coatings; both corona and non-corona treated PET films
	AnchorSil 3000 release coating	Thermal-Cured Anchorage Promoter	650	100	-	-	Can enhance anchorage on PET film, suitable for both thermal solventless and solvent based; for corona treatment PET film only
	AnchorSil 9000 release coating	Radiation-Cured Anchorage Promoter	5	100	-	-	Can enhance anchorage on film for UV cationic cured systems
Other Additive	Tospearl* TP120 release coating	COF Additive	powder	100	-	-	Non-functionalized PDMS additive for reducing coefficient of friction of the release coating, mainly for UV epoxy coating
	SLAM* 3000 release coating	Anti-Misting Additive	>20,000	100	-	-	Anti-misting additive for thermal solventless systems, typically no affect on cure/coverage/release

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Silicones for Release Coatings

Momentive's release coatings include base polymers, controlled release polymers, crosslinkers, catalysts and different additives. By providing different formulas according to a specified substrate, machine condition and targeted performance, we can help you to achieve stable product in a cost-effective manner.

Momentive's SilForce* products are widely used in diversified applications including:

- Silicone release liner for label stock with barcode and pressure sensitive adhesives
- Silicone release liner for commercial graphics and container signage
- Silicone release liner for diversified tapes
- Silicone release liner for industrial applications
- Silicone release coating for bakery paper
- Silicone release paper and film for hygienic applications
- Silicone release liner for optical clear adhesives (OCA) tapes
- Silicone release liner for indoor decorative paper and films

About Momentive Performance Materials

Momentive Performance Materials Inc. (MPM), is a global leader in silicones and quartz and ceramics, with a 75-year heritage of being first to market with performance applications for major industries that support and improve everyday life. The company delivers science-based solutions by linking custom technology platforms to opportunities for customers. Momentive is headquartered in Waterford, New York, U.S. but its footprint spans the globe.

MPM is comprised of two businesses: Silicones and Quartz

The Silicones business is a global business engaged in the manufacture, sale and distribution of silanes, specialty fluids and urethane additives. The unique silanes, elastomers, sealants, adhesives, fluids, urethane additives, and other specialty products manufactured by MPM are delivering innovations in the automotive, electronics, building and construction, cosmetic, aerospace and medical industries. These enabling technologies are at the frontline of innovation.

The Quartz business is a global business engaged in the manufacture, sale and distribution of high-purity fused quartz and ceramic materials. These technologies and high-purity materials for crucibles, ingots, and quartz tubing and rods are the centerpiece of development collaboration within a diverse range of industries. From semiconductors to lighting and consumer electronics, these specialized products set the standard for applications where optical clarity, design flexibility, and durability in extreme environments are critical. MPM's ability to increase its customers' manufacturing productivity and solve complex design problems are the reasons these materials are the most specified by customers around the world.



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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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