MOMENTIVE

Technical Data Sheet

SilForce* UV9300

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Description

SilForce UV9300 is an epoxide-functional polydimethylsiloxane copolymer designed for use as a photocurable release agent. UV9300 is mixed with UV9380C or UV9390C photocatalyst prior to use, and is then applied to film or paper substrates by means of standard solvent-free silicone coating techniques. Catalyzed UV9300 coatings are rapidly crosslinked on exposure to focused ultraviolet light. The proprietary UV9300 polymer structure includes non-functional linear polydimethyl siloxane chains which provide easy release from most pressure sensitive adhesives, but is also sufficiently rich in reactive epoxy groups to insure fast photocure response and good photocatalyst compatibility.

Key Features and Benefits

- Fast UV cure in presence of oxygen (inerting of cure chambers not required)
- Low temperature cure (ideal for thermally sensitive film and plastic liners)
- Stable,easy aged release from most acrylic and rubber based PSA's
- Long,stable catalyzed bathlife at room temperature in the dark
- Non-hazardous coating baths, easy to handle and use

Properly coated and cured UV9300 release coatings provide easy, stable aged release from most organic acrylic and rubber based PSA's. Typical release performance data are displayed in Figures 1 and 2. Performance is largely determined by substrate and adhesive and is always application-specific.

FIGURE 1.

5206_u1.gif

FIGURE 2

5206_u2.gif

Typical Physical Properties

Property	UV9300 Polymer
% Solids*	> 99%
Viscosity, cstks @ 25°C	300 cstks @ 25°C
Epoxy Equivalent Weight**	950 grams/mole oxirane
Specific Gravity Potentiometric titre *(150° C weight loss)	0.99

Potential Applications

SUBSTRATES

SilForce UV9300 is most commonly coated on glossy plastic liner materials including polyethylene, polypropylene, polyester, and polystyrene, and on laminate liner constructions such as polyethylene and polypropylene krafts. Best cure and anchorage are achieved by use of plastic liners which are free of mobile plasticizers and slip agents, and by application of in-line corona treatment to at least 40 dynes/cm level prior to coating. Flame-treated, chemically-treated or films otherwise modified to aid silicone anchorage are also widely used to produce UV silicone release liners. UV9300 can also be

applied to certain paper and glassine liner materials. Such substrates should have very good holdout properties, and should be acidic or neutral via sizing or other coating to insure a surface which is chemically compatible with cationic UV cure processes. Alkaline materials present in many commercial paper liners such as conventional SCK interfere with photocure and anchorage of UV9300. Thorough evaluation of compatibility of any prospective liner with UV9300 cure chemistry and anchorage is strongly advised before committing to commercial production with UV9300.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a 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

SilForce UV9300 epoxysilicone and UV9380C & UV9390C photoinitiators will retain their properties for up to 12 months from date of shipment from Momentive Performance Materials when stored in original sealed containers at or below 25°C. Silforce UV curable polymers and catalysts are reactive materials, so care must be taken to prevent inadvertent contamination with strong acids, bases, or oxidizing agents.

Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at www.momentive.com or, upon request, from any Momentive Performance Materials (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.

Processing Recommendations

USE OF THE PRODUCT

UV9300 polymer is blended with UV9380C photocatalyst solution immediately before use. 1 to 3 parts of UV9380C are blended with 100 parts of UV9300, the precise formulation being dependent on substrate and application. 1-2 parts catalyst are normally sufficient for coating UV9300 on film or plastic laminate liners, such as polykraft, LDPE, OPP, and polyesters, while 2-3 parts of catalyst should be used when coating UV9300 on paper or glassine liners. Coating baths should be well-agitated for at least 10 minutes to completely disperse UV9380C in UV9300.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

From automotive to healthcare, from electronics to construction, products from Momentive Performance Materials Inc. are practically everywhere you look. We are a global leader in silicones and advanced materials with a 70+ year heritage of innovation and being first to market – with performance applications that improve everyday life. By knowing our customers' needs and creating custom technology platforms for them, we provide science based solutions to help customers increase performance, solve product development issues and engineer better manufacturing processes.

Contact Information

For product prices, availability, or order placement, contact our customer service by visiting www.momentive.com/Contacts

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

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