

## **SilFORT™ AS4700 with SilFORT™ SHP470-FT205 Basecoat**

### **SilFORT\* AS4700 with SilFORT\* SHP470-FT2050 Basecoat**

#### **Description**

The SilFORT AS4700 hardcoat with the SilFORT SHP470-FT2050 basecoat is a thermally cured abrasion resistant, weatherable silicone hardcoat system, designed primarily to protect dark colored to black polycarbonate substrates against the effects of harsh environmental components and ultraviolet radiation. With its new generation of UV absorbers, this protective hardcoat system for polycarbonate is an excellent candidate to consider for imparting greater protection of black and other parts than other coating systems.

#### **Key Features and Benefits**

- Excellent ultraviolet radiation protection for colored polycarbonate
- Excellent resistance to microcracking
- Abrasion and mar resistance
- Solvent and chemical resistance
- Good clarity
- Thermal resistance
- Reduced basecoat application viscosity

#### **Typical Physical Properties**

| Property | SilFORT AS4700 Hardcoat | SilFORT<br>SHP470-FT2050<br>Basecoat |
|----------|-------------------------|--------------------------------------|
|          |                         |                                      |

|                                   |                                 |   |
|-----------------------------------|---------------------------------|---|
| Solids Content, % by weight       | 24 - 27                         | 8,7 - 9,3   |
| Solvent                           | 2-Propanol, 1-Butanol, Methanol | 1-Methoxy-2-Propanol, Diacetonalcohol, Methyl-Isobutylketon |
| Density, g/cm <sup>3</sup> @ 25°C | 0.92                            | 0.94 - 0.96   |
| pH                                | 4 - 6                           | N/A   |
| Viscosity, cSt @ 25°C             | 3 -7                            | 75 - 95   |

## Instructions for Use

### General Requirements

Areas where coated, wet parts are handled, should be clean and dust-free (Class 1,000 acc. to US Federal Standard 209e or class <6 acc. to ISO 14644-1). If necessary, parts should be washed or wiped clean with e.g. 2-Propanol, followed by an ionized air blow-off. Cleanliness is critical for the production of good parts.

Both basecoat and hardcoat solutions should be filtered continuously through a 5 to 8 µm pre-filter followed by a gel-filter of 1 µm.

For curing, electric or indirect gas fired ovens with good convection and air exchange and an overall temperature variation of +/- 2 °C are recommended.  
Both products have to be oven cured.

For the best optical results of basecoat & hardcoat, especially on transparent parts, flow- or dip-coating are strongly recommended.

### SiIFORT SHP470FT-2050 Basecoat

The basecoat can be applied by dip, spray or flowcoating to polycarbonate parts that have an initial stress level of less than 1000 psi (6.9 MPa). If a higher stress level is

found to exist, the tool and molding conditions should be adjusted to reduce residual stress on parts. Alternatively, parts can be annealed to reduce stress, (for example, 30 minutes at 130°C for each 2.5 mm of part thickness). If necessary, basecoat solids may be reduced by adding solvent.

### **SilFORT AS4700F Hardcoat**

The hardcoat can be applied by dip, spray or flowcoating to polycarbonate parts with the basecoat on. If necessary, hardcoat solids may be reduced by adding solvent.

### **CAUTION**

Do not use hardcoat solvents, to dilute basecoat or flush basecoat piping system.

For further information on application, flash off and curing conditions of both products, refer to Momentive Performance Materials' processing recommendations or consult one of our application experts.

### **Patent Status**

本書のいかなる内容も、関連特許が存在しないことを暗示したものではありません。またいかなる特許についても、その権利者による許可なしに、その特許が対象とする発明を実施するための許可、誘因または推奨を構成することはできません。

### **Product Safety, Handling and Storage**

#### **SilFORT SHP470FT-2050 Basecoat**

Store and ship at ambient temperature approximately +2°C to +38°C. When stored in original sealed container, SilFORT SHP470FT-2050 will have a shelf life period of 4 years. Exposures to very low temperatures may cause some solid precipitation. If this occurs, the precipitate may be re-dissolved by submerging the vented closed container in a warm water bath. Mix until homogeneous.

#### **SilFORT AS4700F Hardcoat**

Refrigeration is required. The shelf life period is 3 months from date of shipment if stored in the original unopened container between 4 - 10°C or below.

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](http://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](mailto:commercial.services@momentive.com)

## Telephone

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

For literature and technical assistance, visit our website at: [www.momentive.com](http://www.momentive.com)

**DISCLAIMER:**

**THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY “SUPPLIER”), ARE SOLD SUBJECT TO SUPPLIER’S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER’S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.** Each user bears full responsibility for making its own determination as to the suitability of Supplier’s materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier’s products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Supplier’s standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

\* SilFORT™は Momentive Performance Materials Inc. の商標です。

The use of the “™” symbol designates registered or unregistered trademarks of Momentive Performance Materials Inc. or its affiliated companies. Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.