

SilFORT UVHC7400 clear coat

Description

SilFORT UVHC7400 clear coat is a highly abrasion resistant UV-curable coating used on a range of interior automotive applications to provide protection against typical substances such as creams, sun lotions and perspiration, as well as an enhanced surface appearance to components requiring a high gloss finish.

Additionally, SilFORT UVHC7400 clear coat typically exhibits low edge build up that, in combination with its fast UV-cure response, can allow increased productivity even on existing coating lines.

Key Features and Typical Benefits

- Good weatherability
- Excellent abrasion resistance
- Easy-to-clean properties
- Excellent transparency
- Excellent chemical resistance
- Good adhesion to various PC, PMMA grades, PET and TAC films
- Good adhesion to printed surfaces

Typical Physical Properties

Property	Unit	Typical Value
Physical Form	-	Liquid
Appearance	-	Clear, pale yellow
Solids Content	% by weight	Approx. 62
Dynamic Viscosity (at 25 °C)	mPa•s	Approx. 43

Density	g/cm ³	Approx. 1.16
Shelf Life ⁽¹⁾	Months	15

(1) From date of manufacturing, in original unopened container.

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

Potential Applications

SiIFORT UVHC7400 clear coat is an excellent candidate to consider for use as a coating for: displays, door handles, automotive trims, gear shift knobs or similar.

General Considerations for Use

Application Methods	Spray, flow, dip, roller coating, digital printing
Reducing Solvents	1-Methoxy-2-propanol (CAS#107-98-2) 2-Butanol (CAS#78-92-2) 2-Propanol (CAS#67-63-0) ⁽²⁾
Relative Humidity (application and ambient flash off)	Max. 65%
Room Temperature Flash Off	20 – 30 °C for 1 – 3 minutes
Pre-heating	1 to 6 minutes to Reach 65 – 95 °C part surface temperature ^{(3), (4)}
Intermediate Cool Down	Optional
UV-Cure	1 – 2 J/cm ² UV-A (EIT Inc. Power Puck II Device) ^{(5), (6)}
Recommended Hardcoat Thickness ⁽⁷⁾	8 – 16 µm
Recommended Thickness of Interpenetrating Layer	>1 µm ⁽⁸⁾

(2) Other compatible solvents may be considered.

(3) Longer pre-heating times may be required when using convection heating instead of IR-heating.

(4) Modified, high heat resistant PC grades may require higher pre-heat temperatures.

(5) Use of un-doped, medium pressure mercury arc lamps or microwave powered Hg lamps with > 80 W/cm power is recommended. Typical UV-irradiance is 0.2 to 0.6

W/cm² UV-A irradiance. 0.25 W/cm² or higher may be required to achieve desired adhesion results after harsh humidity cycles.

(6) For applications that mainly require chemical resistance against solvents such as ketones, SilFORT UVHC7400 clear coat may be cured at a lower UV-dosage (0.5 J/cm²).

(7) Refractive Index $n = 1.5$

(8) Higher thickness up to 6 μm may further improve adhesion after harsh humidity cycles.

For best results in a clear coat application, filtration of the coating solution with a 5 μm pre-filter followed by a 1 μm absolute gel-filter is advised.

To help ensure adequate UV-cure, contact the UV-lamp supplier to assist in selection of appropriate UV-reflectors for the parts to be treated.

Do not expose product to any source of visible white light prior to UV-cure. Special care should be taken to not use semi-transparent pipework, when white light is present.

Packaging

Currently available in:

25 kg Steel Pail with PE liner

180 kg Steel Drum with PE liner

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.

Contact Information

For product prices, availability, or order placement, contact our customer service at [Momentive.com/CustomerService/](https://www.momentive.com/CustomerService/)

For literature and technical assistance, visit our website at: 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 is a trademark of Momentive Performance Materials Inc.

Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.