

SiIFORT™ UVHC3000K

Description

SiIFORT UVHC3000K is a UV-curable, silica-modified coating, designed to give optimum weathering, chemical and abrasion protection to Polycarbonate. In particular, UVHC3000K is designed for use on Vehicle Headlamps. Products coated with UVHC3000K include applications where superior weathering and mar resistance combined with chemical resistance is demanded. UVHC3000K is supplied as a singlecomponent lacquer in a mild glycol-ether solvent. This makes it suitable for chemical-sensitive substrates such as Polycarbonate, PMMA, SAN, etc.

Key Features and Benefits

Transparent

Suitable for the protection of high quality optical parts such as headlamps. Provides easy-to-clean properties

Adhesion to many plastic substrates High chemical resistance

High cure response Single solvent formulation Easy to recycle

Application by spray, dip, roller and flow Superior weatherability

Typical Physical Properties

	Unit	Typical Value
Physical Form	-	Liquid
Appearance	-	clear, slightly yellow
Solids content	%	45
Dynamic viscosity (@ 25°C)	mPa·s	9
Abrasion resistance ¹	Δ haze in %	< 10

Water soak adhesion ²	-	Gt 0
Density	g/cm ³	1.025

ΔE after 2000 hours ^{3,4}	-	0.3
Yellowness-Index acc to ASTM E313 after 2000 hrs ³	-	< 0.5
ΔHaze acc to ASTM D1003 after 2000 hours ³	%	0.6
Grey scale acc to ISO 105A02 after 2000 hours ³		>4
Shelf life period ⁵	days	360

- 1ASTM D1044/1003, 500 cycles, CS10F wheels, 4th generation
- 210d at 65°C water immersion followed by tape pull test according to EN ISO 2409 on various PMMA, PC, SAN, substrate dependent

3Test Protocol: ASTM G155 Black Panel Temperature: 70 °C Chamber Temperature: 55 °C Relative Humidity: 50% Irradiance at 340nm: 0.55 W/m² Xenon Lamp Filters: Inner: S.Boro, Outer: S.Boro

$$4 \Delta E = ((L1L2)^2 + (a1-a2)^2 + (b1-b2)^2)^{1/2}$$

5 from manufacturing day

Potential Applications

The UVHC3000K can be applied by dip, spray, roller or flow coating methods. The coating is supplied at 45% non volatile content. The coating may be thinned with 1-methoxy-2-propanol (Dowanol PM) or 2- propanol(iso propyl alcohol) and other solvents. (please inquire regarding the suitability of other solvents)

For all coating processes a two stage cartridge filter system consisting of a 5-8 micrometer pre-filter (nominal) and a second filter of 0.5-1.0 micrometer(absolute,gel) is recommended. A flash-off period of 2 - 5 minutes is needed for evaporation of the solvents (spray application needs a shorter flash-off time than flow, dip or roller coating). Recovered over spray can be re-used by using a purpose designed recovery system.

After the flash-off period, the coated substrate should be pre-conditioned at 65-95°C part surface temperature for 1.5 - 3 minutes using Infra Red Heating to ensure

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.

Packaging

UVHC3000K is available in 25 kg pails and 180 kg drums.

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

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