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DK.... Kunststoff-Service

Product Information: **DK-Batch R 315**

Ultra-high molecular weight functionalised siloxane polymer dispersed in polycarbonate.

APPLICATIONS
• Additive in polycarbonate compatible systems.

TYPICAL PROPERTIES
Specification writers: These values are not intended for use in preparing specifications. Please contact DK Kunststoff-Service sales representative prior to writing specifications on this product.

Property	Units	Values
Appearance		Off-white pellets
Siloxane content	%	50
Organic resin		Polycarbonate, 15 MFI
Suggested use level		0.2 to 10

FEATURES

- Imparts processing improvements and modified surface characteristics

BENEFITS
- Improved throughput
- Reduced energy consumption
- Enhanced wear resistance
- Improved slip properties
- Reduced waste • Enhanced stability vs. traditional processing aids and lubricants

COMPOSITION
- Free flowing solid pellets

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DESCRIPTION

DK-Batch R 315 is a pelletised formulation containing 50% of a functionalised ultra-high molecular weight (UHMW) siloxane polymer dispersed in polycarbonate (PC) homopolymer. It is designed to be used as an additive in polycarbonate compatible systems to impart benefits such as processing improvements and modification of surface characteristics. Liquid siloxane plastic additives have been used for several years to improve the lubricity and flow of thermoplastics. They are effective in this role although some difficulties have been experienced in the incorporation of liquids into thermoplastic melts without the use of specialised equipment. It has also been difficult to produce masterbatches with greater than 20% liquid siloxane because of processing difficulty and bleed problems. The Masterbatches address these problems by supplying a high concentration of a functionalised ultra-high molecular weight (UHMW) siloxane as a dispersion in a dry pellet form in a variety of thermoplastics.

BENEFITS

When added to polycarbonate or similar thermoplastics at 0.2% to 2.0%, improved processing and flow of the resin is expected, including better mould filling, less extruder torque, internal lubrication, mould release and faster throughput. At higher addition levels, 2% to 10%, improved surface properties are expected, including lubricity, slip, lower coefficient of friction, and greater mar and abrasion resistance. DK-Batch R 315 is expected to give improved benefits compared to conventional lower molecular weight siloxane additives, e.g., less screw slippage, improved release, a lower coefficient of friction, fewer paint and printing problems, and a broader range of performance capabilities.

Figure 1 shows a significant effect on coefficient of friction values.

Figure 1: Coefficient of friction

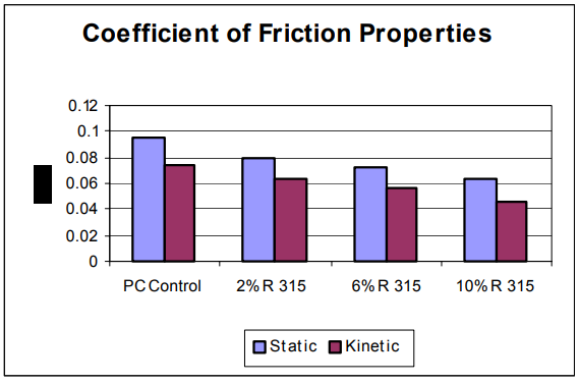
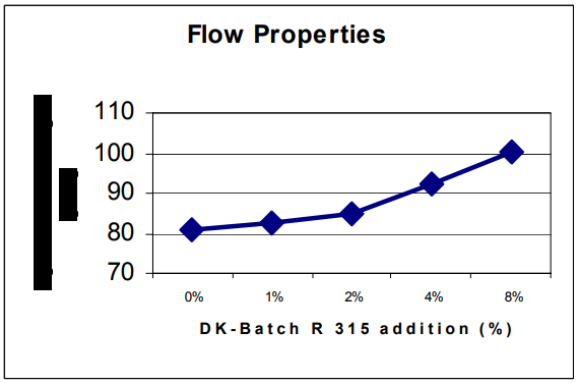


Figure 2: Spiral flow properties



In a standard injection moulding spiral flow test, the siloxane additive increases flow length of the polycarbonate at a given temperature.

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HOW TO USE
DK-Batch R 315 pellets can be added during compounding in a single screw extruder or added at the feed hopper during injection moulding or extrusion.

HANDLING PRECAUTIONS
Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information.

USABLE LIFE AND STORAGE
When stored at or below 35°C / 95°F in the original unopened containers, this product has a usable life of 48 months from the date of production.

PACKAGING
This product is available in 25 kg bags

LIMITATIONS
This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

LIMITED WARRANTY INFORMATION - PLEASE READ CAREFULLY
The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that the products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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