Product Sheet

DuPont™ Crastin® Hydrolysis-resistant Portfolio Advances Sensors and Electronic Components for E-mobility

The advancement of electric, autonomous, and automated vehicles relies in large part on more sensors than ever that monitor and control everything from powertrain to chassis components. DuPont's AHEAD™ (Accelerating Hybrid-Electric Autonomous Driving) initiative offers the DuPont™ Crastin® HR portfolio that is designed to meet the needs of manufacturers making vehicles with sophisticated sensor systems and electronic components like switches, connectors, and ECU (Electronic Control Units). It delivers hydrolysis-stabilized PBT with stable electrical properties under high-temperature and humidity conditions.

Crastin® HR products adapt to a broad range of requirements for safety, efficiency, and connectivity.

Crastin® HR portfolio – Main Features

Grade	GF Content	Impact Modified	Flame Retardant	Laser Marking	Laser Transparent
HR5315HFS NC010	15	✔			✔
HR5315HFS BK591	15	✔		✔	
HR5330HFS NC010	30	✔			✔
HR5330HFS BK591	30	✔		✔	
HR5330HFS OR516	30	✔		✔	
HR5430HFS NC010LT	30	✔			✔ (improved)
HR5430HFS BK238LT	30	✔			✔ (improved)
FRHR5315NH NC010	15		✔		✔
FRHR5315NH BK591	15		✔	✔	
FRHR5315NH BK219LT	15		✔		✔
FRHR5325NH BK219LT	25		✔		✔
FRHR5325NH BK591LM	25		✔	✔	
FRHR5325NH OR162	25		✔	✔	
FRHR5325NH NC010	25		✔		✔

Source: DuPont

Robust materials for demanding sensor conditions

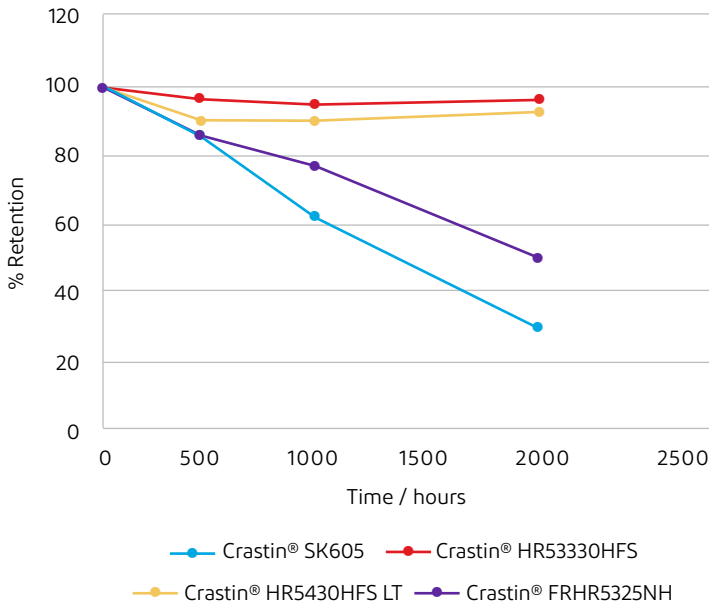
Sensors must be robust enough to perform under demanding conditions. Sensor housings made with Crastin® HR materials are reliable when exposed to oils, high temperatures, and high humidity. They also can be laser welded without compromising electronic components contained within the housing.

The Crastin® HR family includes multiple grades with different glass fiber levels that all provide hydrolysis resistance that extends component life and enhances vehicle reliability.

Car manufacturers and suppliers turn to Crastin® HR products for:

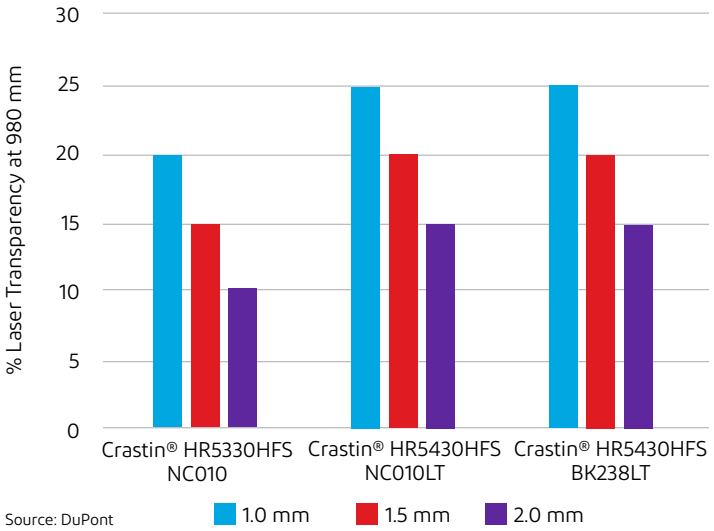
- Grades meeting OEMs hydrolysis-resistance requirements (e.g. USCAR2 and 85°C/85% relative humidity tests)
- Laser-markable grades for part identification through QR or DMC codes
- Good flowability and improved laser transparency for high productivity and ease of assembly
- Best-in-market CTI and dielectric properties under high-temperature conditions allowing design flexibility, miniaturization, and high-voltage applications
- Non-halogenated, flame-retardant materials
- Easy processing due to excellent melt viscosity stability

Retention of stress at break after 85°C, 85% RH exposure



Source: DuPont

Laser transparency study at different thicknesses



Source: DuPont

Crastin® Delivers Cost-effective High Performance

With more than 100 grades, Crastin® PBT is the resin of choice for cost-effective high performance across a wide range of industrial applications.

Designers, engineers, and manufacturers rely on Crastin® PBT for stiffness and toughness, superior electrical insulation properties, and exceptional surface finishes.

Crastin® is also preferred for its excellent dimensional properties and stability versus moisture as well as its heat resistance. It enables DuPont to offer the industry's largest portfolio of EIS pre-approved by Underwriters Laboratories (UL) grades and recognized to IEC standards.

DuPont™ Crastin® PBT offers manufacturers the advantage of superior flow qualities. It's easy to process on conventional injection molding machines. Plus, it's available in a wide range of grades designed for low-warpage, hydrolysis resistance, and for blow-molding and extrusion.

With Crastin®, DuPont materials science experts help customers gain cost efficiency without compromising on performance.

For more information, contact your DuPont representative.

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