

# COVERING CATALYST AND EXHAUST MATERIAL CHALLENGES WITH ULTEM™ RESIN



Tractors and other agricultural machines that are designed with exposed catalysts or exhaust systems are often equipped with covers for safety and aesthetic reasons. Traditionally these covers are made from metal, but this can add weight and cost. ULTEM™ resin offers a lasting, light-weight alternative without sacrificing the required high heat performance and chemical resistance.

## A POTENTIAL SAFER ALTERNATIVE

Thermoplastics, such as ULTEM resin, have a lower thermal conductivity than metal. This may help reduce the risk of burns, and fires that can result from contact of flammable materials with the cover.

## NEW DESIGNS THAT CAN BE PRODUCED AT SCALE

As a thermoplastic material solution, ULTEM resin can be used for mass part production, including components with complex designs. Additionally, ULTEM resin may make it possible to reduce overall costs by integrating fixtures and inserts into one part.

## SKIP THE PAINTING STEP

Covers are often very visible parts, so good aesthetics can be important. ULTEM resin provides a nice high gloss and scratch resistant surface finish straight out of the mold, which can eliminate the need for painting.



## ULTEM™ RESIN MATERIAL PROPERTIES

KEY PROPERTIES	Testnorm	Unit	AUT200 Unfilled ULTEM resin	AUT200G4 20% GF ULTEM resin
<b>MECHANICAL</b>				
Tensile Modulus, 1 mm/min	ISO 527	MPa	3200	6800
<b>IMPACT</b>				
Izod Impact, notched, 23°C	ISO 180/1A	kJ/m <sup>2</sup>	5	4
Izod Impact, notched, -30°C	ISO 180/1°	kJ/m <sup>2</sup>	5	-
<b>THERMAL</b>				
HDT, 0.45 MPa	ISO 75/Be	°C	200	210
Vicat Softening Temp, Rate B/120	ISO 306	°C	212	218
CTE, 20 to 150°C, flow	ISO 11359-2	ppm/°C	50	25
CTE, 23°C to 150°C, xflow	ISO 11359-2	ppm/°C	50	48
Thermal conductivity	ISO 8302	W/m-°C	0.16	0.22
<b>PHYSICAL</b>				
Density	ISO 1183		1.27	1.42

### ALSO AVAILABLE AS AN ISCC+ CERTIFIED SUSTAINABLE SOLUTION

Contact our sales team to learn more about the available options for ULTEM resin grades using renewable biobased sources.



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