

Hybrid[®] S466 PC/ABS Alloy Resin



Product Attributes

- ABS + PC 0432
- Extreme Toughness
- High Heat Resistance
- High Flow
- Pre-colored

Material Approvals

- Industry Callout SAE J1685 ABS=PC 0432

<u>PROPERTY</u>	<u>METHOD</u>	<u>UNIT</u>	<u>VALUES</u>
PHYSICAL			
Melt Flow Index (260°C x 3.8kg)	ASTM D1238	g/10min	12.8
Melt Flow Index (260°C x 2.16kg)	ASTM D1238	g/10min	6.2
Melt Flow Index (230°C x 3.8kg)	ASTM D1238	g/10min	2.8
Specific Gravity	ASTM D792	-	1.14
Water Absorption (24-Hr Immersion)	ASTM D570	%	0.1
Mold Shrinkage (Flow, 1/8 in.)	ASTM D955	in/in x 10 ⁻³	5-7
MECHANICAL @ 73°F*			
Izod Impact Strength (Notched 1/8")	ASTM D256	ft•lb/in (<i>J/m</i>)	15.0 (<i>801</i>)
Tensile Strength at Yield	ASTM D638	psi <i>MPa</i>	8,600 <i>59</i>
Tensile Strength at Break	ASTM D638	Psi <i>MPa</i>	8,200 <i>57</i>
Elongation at Break	ASTMD638	%	70
Flexural Modulus	ASTM D790	psi <i>MPa</i>	340,000 <i>2,344</i>
Flexural Strength at Break	ASTM D790	psi <i>MPa</i>	10,000 <i>69</i>
THERMAL*			
Heat Deflection Temp. (Unannealed)	ASTM D648		
264 psi (<i>1.82 MPa</i>)		°F (°C)	239 (<i>115</i>)
66 psi (<i>0.46 MPa</i>)		°F (°C)	-
FLAME CLASS RATING*			
94 HB (Tested Thickness)	UL 94	in (<i>mm</i>)	0.059 (<i>1.5</i>)

†The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits or used alone as a basis for design. This information is not intended as a warranty of any kind. Buyers must make their own representative test and assume all risks of use, whether used alone or in combination with other products. Entec Polymers, LLC assumes no obligation or liability of any advice furnished by it or results obtained with respect to these products. All warranties expressed or implied including warranties of merchantability for a particular purpose or use are excluded and disclaimed. Entec Polymers, LLC assumes no liability for use of products in infringement of any patent. The foregoing limitation of remedy and exclusion of liability is reflected in and is part of the consideration for the price at which the products are sold by Entec Polymers, LLC. All data displayed herein has been obtained via testing of injection-molded specimens of natural color. Pigmentation may affect certain properties to various degrees.



During start up production of a temperature control unit inside a popular SUV, it was discovered that the specified PC/ABS, molded in color, caused too much light bleed-through. This not only gave the bezel an unattractive appearance, but it also subtracted from the visibility of the control gauge itself. The options were down to increasing wall thickness or change materials, neither of which were good ones at the time. Due to the tier two suppliers familiarity with Entec Engineered Resins, they gave us the opportunity to solve the problem.

Because of physical property requirements, Entec's HYBRID[®] S466 grade was selected from the line of PC/ABS alloys and the color match process began. The challenge was to increase the parts opacity without detrimentally affecting its integrity. While the first two matches moved them closer to the desired target, we were still not quite where we needed to be. The third iteration proved successful earning us the business and a spot on the SAE J1685 ABS + PC 0432 spec.

Our responsiveness in identifying a possible solution and throwing resources in that direction in a rapid manner was the key to solving a customer issue. The ability to turn three color matches around in a very short period of time meant avoiding re-design and costly delays.