ABS/TPU

Sohner Plastics
Intelligent Automation Packaging

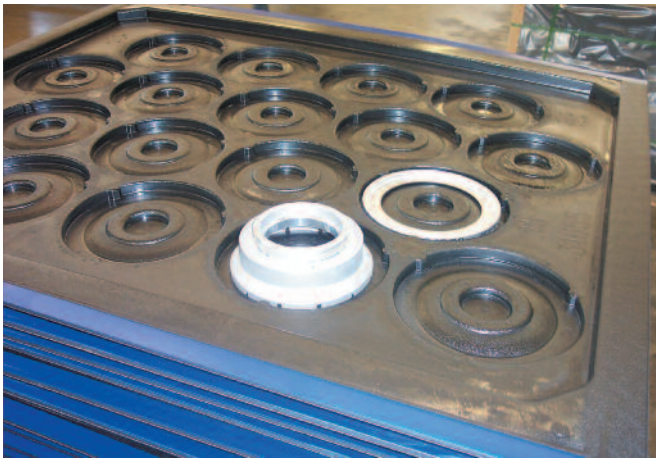
Non-Shaving Plastic Material

New plastics manufacturing helps Daimler, Chrysler and GM "come clean" with the shipping of engine components.

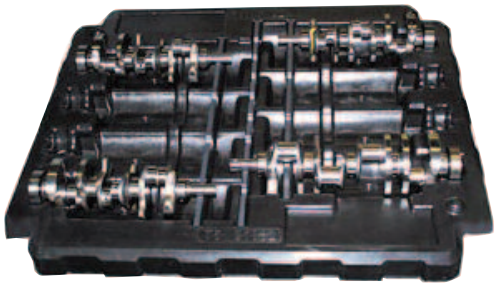
Sohner Plastics, Germany, has been working with Daimler engineers in Germany to solve the problem of Plastic Tray "shavings" in the shipping of Engine Blocks, Cylinder Heads, Transmission Rings and other components with sharp, machined edges.

The parts with sharp machined edges were "shaving" the plastic shipping trays causing slivers of plastic and dirt to attach to the parts requiring them to be re-cleaned and inspected before final assembly.

Sohner Plastics has developed new Thermoformed Trays with a special material, ABS/TPU, that cannot be cut by the sharp machined edges of the parts. This eliminates the need to clean the parts before final assembly in the engine with great savings in time and money.



This unique material it is co-extruded with a rigid base layer of ABS and a cut resistant cover of TPU and requires special thermoforming tooling and techniques.



Vibration Test for General Motors

Standard HPDE produces plastic shavings

ABS/TPU produces no shavings

Sohner Plastics

Call Us Today at: **734-222-4847** e-mail: **sales@sohnerplastics.com**
Visit us on the Internet at: **http://www.sohnerplastics.com**

Technical Specifications

SOHABS-160D (ABS/TPU CO-EXTRUDE)

Properties for ABS*	Test method	Unit	Norm	Value
Density		kg / m³	ISO 1133	ca. 1,1
Melt Flow Rate	220 °C / 10 kg	g / 10 min	1133	52
Melt Flow Rate	220 °C / 10 kg	cc / 10 min	1133	53
Izod Impact, Notched	23 °C	kJ / m²	180 / 1A	25
	-30 °C	kJ / m²	180 / 1A	12
Charpy Impact Notched	23 °C	kJ / m²	179 / 2C	15
	-30 °C	kJ / m²	179 / 2C	9
	23 °C	kJ / m²	179 / 1eA	23
	-30 °C	kJ / m²	179 / 1ea	13
Tensile Yield Strength	50 mm / min	MPa	527	43
	100 mm / min	MPa	527	43
Tensile Elongation at Yield	50 mm / min	%	527	27
	100 mm / min	%	527	28
Tensile Modulus	1 mm / min	MPa		2140
Flexural Strength	2 mm / min	MPa	178	65
Flexural Modulus	2 mm / min	MPa	178	2050
Vicat Softening Temperature	49 / 50 °C	°C	306 B	102
Heat Deflection Temperature	182	MPa	75 -1	101
Horizontal Burning	1,5 mm	UL 94		HB
Horizontal Burning	3 mm	UL 94		HB
Horizontal Burning Speed	2 mm thickness	mm / min	3795	55

Properties for TPU*	Test method	Unit	Norm	Value
Density		g / cm³	DIN 53479	12
Hardness	15 s	Shore A	DIN 53505	77
Tensile Strength		MPa	DIN 53504	45
Elongation		%	DIN 53504	650
Elongation Value	100% stretching	MPa	DIN 53504	4
	300 % stretching	MPa	DIN 53504	8
Tear Resistance		N / mm	DIN 53515	60
Abrasion		mm³	DIN 53516	35

***ABS/TPU** - Datasheet the properties are based on our knowledge and experience. For representing the values in an application you must test. This applies in particular to the fitness for a particular use. The same applies to our other information spoken and written. Stand 08/12

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