

# CAMPUS® Automotive OEM Datasheet



Terluran® HI-10 - ABS

INEOS Styrolution Europe GmbH

Physical properties	I	M	E <sup>1</sup>	Value	Unit	Test Standard
Melt volume-flow rate, MVR	X	X	X	5.5	cm <sup>3</sup> /10min	ISO 1133
Temperature	X	X	X	220	°C	ISO 1133
Load	X	X	X	10	kg	ISO 1133
Viscosity number	X	X	X	-	cm <sup>3</sup> /g	ISO 307, 1157, 1628
Molding shrinkage, parallel	X	X	X	-	%	ISO 294-4, 2577
Molding shrinkage, normal	X	X	X	-	%	ISO 294-4, 2577
Humidity absorption	X	X	X	0.21	%	Sim. to ISO 62
Water absorption	X	X	X	1.03	%	Sim. to ISO 62
Density	X	X	X	1030	kg/m <sup>3</sup>	ISO 1183
Type and amount of reinforcement				-	-	ISO 3451-1
Mechanical properties	I	M	E <sup>1</sup>	Value	Unit	Test Standard
Tensile modulus	X	X	X	1900	MPa	ISO 527-1/-2
Yield stress	X	X	X	38	MPa	ISO 527-1/-2
Stress at break	X	X	X	*	MPa	ISO 527-1/-2
Yield strain	X	X	X	2.8	%	ISO 527-1/-2
Strain at break	X	X	X	*	%	ISO 527-1/-2
Charpy impact strength, +23°C	X	X	X	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	X	X	X	35	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy impact strength, -30°C	X	X	X	140	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, -30°C	X	X	X	13	kJ/m <sup>2</sup>	ISO 179/1eA
Puncture test - ductile/brittle transition temperature	X		X	-	°C	ISO 6603-2
Thermal properties	I	M	E <sup>1</sup>	Value	Unit	Test Standard
Melting temperature, 10°C/min	X	X	X	-	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	X	X	X	-	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	X	X	X	93	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	X	X	X	97	°C	ISO 75-1/-2
Temp. of deflection under load, 8.00 MPa	X	X	X	-	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	X	X	X	90	°C	ISO 306
Coeff. of linear therm. expansion -40°C to +100°C, parallel	X	X	X	-	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion -40°C to +100°C, normal	X	X	X	-	E-6/K	ISO 11359-1/-2
FMVSS	X			-	-	ISO 3795 (FMVSS 302)
Burning rate, FMVSS, Thickness 1 mm	X			-	mm/min	ISO 3795 (FMVSS 302)
Burning Behav. at 1.5 mm nom. thickn.		X	X	HB	class	IEC 60695-11-10
Emission / Odor	I	M	E <sup>1</sup>	Value	Unit	Test Standard
Emission of organic compounds	X			-	µgC/g	VDA 277
Thermal desorption analysis of organic emissions	X			-	µg/g	VDA 278
Odor test	X	X <sup>2</sup>		-	class	VDA 270
Long term / Aging	I	M	E <sup>1</sup>	Value	Unit	Test Standard
Thermal stability in air (Charpy at 50% decrease, 3000h)	X	X	X	-	°C	DIN/IEC 60216-1
Test specimen				-	-	-

## LTHA-Charpy Notched Impact Strength (23°C)

No data available

<sup>1</sup>I=Interior parts, M=Parts in motor compartment, E=Exterior parts

<sup>2</sup>air-ducting parts with contact to interior

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**LTHA-Stress at Break**

No data available

<b>Weather stability, ISO 4892-2, Method A</b>	<b>I</b>	<b>M</b>	<b>E<sup>1</sup></b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Weather stability delta l			X	-	-	DIN 53236
Weather stability delta a			X	-	-	DIN 53236
Weather stability delta b			X	-	-	DIN 53236
Weather stability delta E			X	-	-	DIN 53236
Weather stability grey scale			X	-	-	ISO 105-A02
<b>Light stability, ISO 4892-2, Method B</b>	<b>I</b>	<b>M</b>	<b>E<sup>1</sup></b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Light stability delta l	X	X		-	-	DIN 53236
Light stability delta a	X	X		-	-	DIN 53236
Light stability delta b	X	X		-	-	DIN 53236
Light stability delta E	X	X		-	-	DIN 53236
Light stability grey scale	X	X		-	-	ISO 105-A02

**Aging in media**

<b>Aging Time</b>	<b>LTHA-Charpy Notched Impact Strength (23°C)</b>			
	<b>0 h</b>	<b>168 h</b>	<b>480 h</b>	<b>1000 h</b>
ISO 1817 Liquid 2, 60°C	-	-	-	-
Diesel EN 590, 100°C	-	-	-	-
Coolant Glysantin G48, 1:1 in water, 125°C	-	-	-	-
DOT No. 4 Brake fluid, 120°C	-	-	-	-
Motor oil OS206 304 Ref.Eng.Oil, ISP, 135°C	-	-	-	-
Automatic hypoid-gear oil Shell Donax TX, 135°C	-	-	-	-
Hydraulic oil Pentosin CHF 202, 125°C	-	-	-	-

**Dynamic mechanical analysis**

**Dynamic Shear modulus-temperature**

No data available

**Dynamic Tensile modulus-temperature**

No data available

**CLTE**

**Thermal expansion**

No data available

<sup>1</sup>I=Interior parts, M=Parts in motor compartment, E=Exterior parts