

# Datasheet

## Durethan BC550Z 900116 DUSXH2

PA 6, non-reinforced, blow molding, improved impact strength, heat-aging stabilized. For the use in tank systems and pressure vessels please notice safety-related technical information within the High Performance Materials TechCenter under [www.us.durethan-tank-systems.lanxess.com](http://www.us.durethan-tank-systems.lanxess.com).

ISO Shortname: ISO 16396-PA 6-I,,BHR,S14-020

Property	Test Condition	Unit	Standard	guide value <sup>1</sup>	
				d.a.m.	cond.
<b>Rheological properties</b>					
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.5	
C Molding shrinkage, transverse	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.5	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.2	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.2	
<b>Mechanical properties (23 °C/50 % r. h.)</b>					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2000	430
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	50	
C Yield strain	50 mm/min	%	ISO 527-1,-2	4.0	
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	140	165
C Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eU	N	N
C Charpy impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eU	N	N
C Charpy notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eA	100	130
C Charpy notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eA	25	25
Izod impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1U	N	N
Izod impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1U	N	N
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1A	85	105
Izod notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1A	25	25
Flexural modulus	2 mm/min	MPa	ISO 178-A	1800	470
Flexural strength	2 mm/min	MPa	ISO 178-A	66	21
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	6.0	9.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	55	14
C Puncture maximum force	23 °C	N	ISO 6603-2	5000	
C Puncture maximum force	-30 °C	N	ISO 6603-2	5700	
C Puncture energy	23 °C	J	ISO 6603-2	65	
C Puncture energy	-30 °C	J	ISO 6603-2	67	
<b>Thermal properties</b>					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	219	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	53	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	1.4	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	1.3	
<b>Other properties (23 °C)</b>					

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Property	Test Condition	Unit	Standard	guide value <sup>1</sup> d.a.m. cond.
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	9.1
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.5
C Density		kg/m <sup>3</sup>	ISO 1183	1070
<b>Processing conditions for test specimens</b>				
C Injection molding-Melt temperature		°C	ISO 294	260
C Injection molding-Mold temperature		°C	ISO 294	80
<b>Processing recommendations</b>				
Drying temperature dry air dryer		°C	-	80
Drying time dry air dryer		h	-	2-6
Residual moisture content		%	Acc. to Karl Fischer	0.00-0.06
Melt temperature (Tmin - Tmax)		°C	-	230-280
Mold temperature		°C	-	60-90

### Notes

**1** Typical properties: these are not to be construed as specifications

**C** These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

#### Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

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