

## Nomenclature

The alphanumeric code adopted for the nomenclature consists of three digits followed by one or more letters.

### First digit

Characteristic digit for Terluran within the BASF line of styrene polymers.  
9 = Terluran containing butadiene rubber

### Second digit

Characteristic for the relative ductility. A high figure signifies high impact resistance; and a low figure, comparatively little impact resistance but great rigidity and hardness.

### Third digit

An indication of the resistance to heat deformation, graduated according to the Vicat softening temperature.

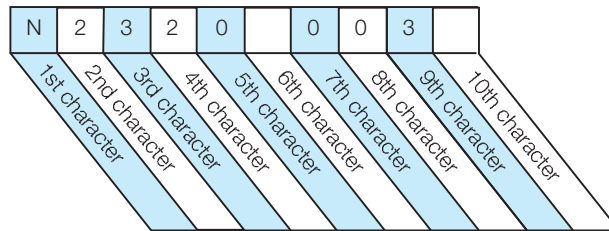
..5 corresponds to VST/B/50 85 -89°C  
..6 corresponds to VST/B/50 90 - 94°C  
..7 corresponds to VST/B/50 95 - 99°C  
..8 corresponds to VST/B/50 100 - 105°C  
..9 corresponds to VST/B/50 > 105°C

### First letter

Indicates the flow.  
A = easiest flow  
Z = poorest flow

### Other letters

E = extrusion product  
G = glass reinforced  
(These products are divided into groups characterized by the digit that follows the letter G and represents one-fifth of the glass fibre fraction, e.g. G 3 = ca. 15% glass fibres)  
Q + numeral = products containing special additives or with special properties



## Examples

Terluran 958 I  
9 = Terluran containing butadiene rubber  
5 = good impact resistance  
8 = very high resistance to heat deformation  
I = easy flow  
Development products are designated by the letters KR and a four-digit numeral.

## Color range

The natural color of Terluran is opaque yellowish white. The products are available in a number of general-purpose opaque shades, and others can be supplied in almost any desired hue.

In some cases, the color numeral is appended by certain letters with the following significance:

T = The shade is liable to change at high processing temperatures.  
L = Under certain circumstances, the colorant is liable to bleed, especially in contact with greasy substances or during surface coating; or it may sublime during processing.  
A = The shade is liable to fade on prolonged exposure to light. The light fastness is less than 5 on the Blue Scale for Wool (DIN 54 003).  
S = Product is optimized for laser marking.

## Note

The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors from the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific or purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

Typical values at 23 °C for uncolored products	Unit	Test method	Specimens	
<b>Features</b>				
Symbol	–	ISO 1043	–	
Density	g/cm <sup>3</sup>	ISO 1183	–	
Reinforcing filler: Glass fibre (GF)	%	–	–	
Colors: natural (n), colored (c), black (bk), special colors (sp) –	–	–	–	
Water absorption, saturation in water at 23°C	%	DIN 53 495/1L	80 Ø · 1	
Water absorption, 24 h at 23°C	%	DIN 53 495/1	50 Ø · 3	
Moisture absorption, saturation in standard conditioning atmosphere 23°C/50% r.h.	%	–	80 Ø · 1	
<b>Processing</b>				
Method of processing: Injection molding (M), Extrusion (E), Blow molding (B)	–	–	–	
Melt volume rate MVR 200/21.6,220/10	cm <sup>3</sup> /10 min	ISO 1133	molding mat.	
Pre-drying: temperature/time	°C/h	–	–	
Melt temperature range, injection molding	°C	–	–	
Mold temperature range	°C	–	–	
Molding shrinkage, free <sup>13)</sup>	%	–	110 · 110 · 2	
Melt temperature range, pipe extrusion/sheet extrusion/blow molding	°C	–	–	
<b>Fire behaviour</b>				
Flammability according to UL Standard				
at h = 1.6 mm thickness	class	UL 94	127 · 12.7 · h	
Flammability of insulating materials for electrical applications				
Method BH	class	IEC 707	125 · 10 · 4	
Method FH	class	IEC 707	125 · 13 · 3	
Flammability of interior materials in passenger cars				
at h ≥ 1 mm thickness (+ means passed)	–	FMVSS 302	355 · 100 · 1	
<b>Mechanical properties</b>				
Tensile modulus of elasticity	MPa	ISO 527–2	acc. to ISO 3167	
Tensile stress at yield (v = 50 mm/min), stress at break* (v = 5 mm/min)	MPa	ISO 527–2	acc. to ISO 3167	
Elongation at yield (v = 50 mm/min), elongation at break* (v = 5 mm/min)	%	ISO 527–2	acc. to ISO 3167	
Tensile creep modulus, 1000 h, elongation 0.5%, +23°C	MPa	ISO 899–1	acc. to ISO 3167	
Flexural strength	MPa	ISO 178	80 · 10 · 4	
Shear modulus	MPa	ISO 6721–2	60 · 10 · 1	
Izod impact strength /1U <sup>38)</sup>	+23°C/–30°C	kJ/m <sup>2</sup>	ISO 180/1U	80 · 10 · 4
Charpy impact strength <sup>38)</sup>	+23°C/–30°C	kJ/m <sup>2</sup>	ISO 179/1eU	80 · 10 · 4
Izod notched impact strength /1A <sup>38)</sup>	+23°C/–30°C	kJ/m <sup>2</sup>	ISO 180/1A	80 · 10 · 4
Charpy notched impact strength <sup>38)</sup>	+23°C/–30°C	kJ/m <sup>2</sup>	ISO 179/1eA	80 · 10 · 4
Izod notched impact strength meth. A <sup>6)</sup>	+23°C	J/m	ASTM D 256	63.5 · 12.7 · 3.2
Ball indentation hardness H 358/30	MPa	ISO 2039-1	≥10 · ≥10 · 4	
<b>Thermal properties</b>				
Heat deflection temp. under 1.8 MPa load (HDT A) <sup>7)</sup> under 0.45 MPa load (HDT B)	°C	ISO 75-2	110 · 10 · 4	
Vicat softening temperature VST/A/50, VST/B/50	°C	ISO 306	≥10 · ≥10 · 4	
Max. service temperature (short cycle operation) <sup>11)</sup>	°C	–	moldings	
Thermal coefficient of linear expansion, longitud. (23–80)°C	10 <sup>-6</sup> /K	DIN 53 752	≥10 · ≥10 · 4	
Thermal conductivity	W/(m · K)	DIN 52 612	260 · 260 · 10	
<b>Electrical properties</b>				
Dielectric constant at 100 Hz/1 MHz	–	IEC 250	80 · 80 · 1	
Dissipation factor at 100 Hz/1 MHz	–	IEC 250	80 · 80 · 1	
Volume resistivity/Surface resistivity	Ω · cm / Ω	IEC 93	80 · 80 · 1	
Dielectric strength K20/P50	kV/mm	IEC 243/1	d = (0.6–0.8)	
Comparative tracking index CTI, test solution A /index CTI M, test solution B	–	IEC 112	≥15 · ≥15 · 4	

Characteristics in blue are taken from the plastics database CAMPUS®. CAMPUS is a registered trademark of the CWFG.

For technical reasons the footnotes are not numbered sequentially.

6) Conversion factor from ISO 180/4A to ASTM D 256: 1 kJ/m<sup>2</sup> = 10 J/m.

11) Empirical values determined on articles repeatedly subjected to the temperature concerned for several hours at a time over a period of several years. The proviso is that the articles were properly designed and processed according to our recommendations.

13) Shrinkage depends on the wall thickness and design of the molding, the gating, and the processing conditions.

38) NB = non-break.

## General-purpose grades for injection molding

958 I	967 K	KR 2893	957 F	996 S	KR 2876/1
ABS	ABS	ABS	ABS	ABS	ABS
1.05	1.05	1.05	1.05	1.03	1.07
n,c,bk,sp	n,c,bk,sp	n,c,bk,sp	n,c,bk,sp	n,c,bk,sp	n,c,bk,sp
1.6	1.6			1.8	
0.4	0.45	0.4	0.4	0.45	0.4
0.4	0.45	0.4	0.4	0.45	0.4
M	M	M	M	M	M
23/18	20/14	40/27	60/40	8/4	/11
80/2-4	80/2-4	80/2-4	80/2-4	80/2-4	80/2-4
210-270	210-270	210-270	210-270	230-270	220-270
40-70	40-70	40-70	40-70	40-70	40-70
0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7
94HB	94HB	94HB	94HB	94HB	
BH3-15mm/min	BH3-15mm/min	BH3-15mm/min	BH3-15mm/min	BH3-15mm/min	
FH3-30mm/min	FH3-30mm/min	FH3-30mm/min	FH3-30mm/min	FH3-30mm/min	
+	+	+	+	+	
2700	2400	2400	2500	1800	2300
53	50	45	50	40	43
3	3	2.5	3	3	2.6
1650	1550			1150	
82	75	73		52	59
950	850			800	
90/50	140/60	80/80	150/60	NB/135	
140/85	190/100	170/90	120/70	NB/170	170/85
17/6	23/7	15/6	11/5	35/17	
12/5	16/6	13/6	12/5	33/13	23/6
160	230	160	120	500	300
113	100	112	117	65	
96/101	95/100	95/99		93/97	93/101
108/101	107/99	106/98	/95	107/92	/100
80	80	80	80	80	80
8-11	8-11	8-11	8-11	8-11	8-11
0.17	0.17	0.17	0.17	0.17	0.17
3.2/2.9	3.1/2.9			3.1/3	
0.013/0.013	0.011/0.013			0.009/0.01	
10 <sup>14</sup> /10 <sup>13</sup>	10 <sup>14</sup> /10 <sup>13</sup>	10 <sup>14</sup> /10 <sup>13</sup>	10 <sup>14</sup> /10 <sup>13</sup>	10 <sup>15</sup> /10 <sup>13</sup>	/10 <sup>13</sup>
85	85	85	85	85	
CTI 600/CTI 200 M	CTI 600/CTI 275 (225) M	CTI 600/	CTI 600/	CTI 600/CTI 475 M	CTI 600
Product that can be readily injection molded; medium impact resistance and great rigidity; eminently suitable for electroplating.	Easy-flow general-purpose injection-molding product with high resistance to impact and heat distortion; intended for a wide range of applications, particularly in the housings sector.	Easy-flow injection-molding product with good ductility and resistance to heat deformation; intended for moldings with thin walls and/or adverse ratios of runner length to wall thickness.	Extremely easy-flow injection-molding product with well-balanced properties; intended for moldings with very thin walls and/or extremely adverse ratios of runner length to wall thickness.	Very-high-impact injection-molding product.	Grade specially developed for injection-molded smart cards. Good balance between toughness and stiffness; outstanding processability enables rapid cycling.

Typical values at 23 °C for uncolored products	Unit	Test method	Specimens	
<b>Features</b>				
Symbol	–	ISO 1043	–	
Density	g/cm <sup>3</sup>	ISO 1183	–	
Reinforcing filler: Glass fibre (GF)	%	–	–	
Colors: natural (n), colored (c), black (bk), special colors (sp) –	–	–	–	
Water absorption, saturation in water at 23°C	%	DIN 53 495/1L	80 Ø · 1	
Water absorption, 24 h at 23°C	%	DIN 53 495/1	50 Ø · 3	
Moisture absorption, saturation in standard conditioning atmosphere 23°C/50% r.h.	%	–	80 Ø · 1	
<b>Processing</b>				
Method of processing: Injection molding (M), Extrusion (E), Blow molding (B)	–	–	–	
Melt volume rate MVR 200/21.6,220/10	cm <sup>3</sup> /10 min	ISO 1133	molding mat.	
Pre-drying: temperature/time	°C/h	–	–	
Melt temperature range, injection molding	°C	–	–	
Mold temperature range	°C	–	–	
Molding shrinkage, free <sup>13)</sup>	%	–	110 · 110 · 2	
Melt temperature range, pipe extrusion/sheet extrusion/blow molding	°C	–	–	
<b>Fire behaviour</b>				
Flammability according to UL Standard				
at h = 1.6 mm thickness	class	UL 94	127 · 12.7 · h	
Flammability of insulating materials for electrical applications				
Method BH	class	IEC 707	125 · 10 · 4	
Method FH	class	IEC 707	125 · 13 · 3	
Flammability of interior materials in passenger cars				
at h ≥ 1 mm thickness (+ means passed)	–	FMVSS 302	355 · 100 · 1	
<b>Mechanical properties</b>				
Tensile modulus of elasticity	MPa	ISO 527–2	acc. to ISO 3167	
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Max. service temperature (short cycle operation) <sup>11)</sup>	°C	–	moldings	
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Thermal conductivity	W/(m · K)	DIN 52 612	260 · 260 · 10	
<b>Electrical properties</b>				
Dielectric constant at 100 Hz/1 MHz	–	IEC 250	80 · 80 · 1	
Dissipation factor at 100 Hz/1 MHz	–	IEC 250	80 · 80 · 1	
Volume resistivity/Surface resistivity	Ω · cm / Ω	IEC 93	80 · 80 · 1	
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<b>Applications</b>				

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- 38) NB = non-break.

## Grades with enhanced heat resistance

## Injection molding grades

968 K	978 T	969 T	949 T	928 S G3	929 U G3
ABS	ABS	ABS	ABS	ABS	ABS
1.06	1.05	1.06	1.06	1.19	1.19
n,c,bk,sp	n,c,bk,sp	n,c,bk,sp	n,c,bk,sp	GF17 n,c,bk,sp	GF15 n,c,bk,sp
0.4	0.45	0.4	0.35	0.3	0.3
0.4	0.45	0.4	0.35	0.3	0.3
M	M	M	M	M	M
21/14	7/4	6/4	5/5	4/4	3/2
80/2-4	80/2-4	80/2-4	80/2-4	80/2-4	80/2-4
210-270	230-270	230-270	230-270	240-270	240-270
40-70	40-70	40-70	40-70	40-70	40-70
0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	max. 0.4	max. 0.4
94HB	94HB	94HB	94HB	94HB	94HB
BH3-15mm/min	BH3-15mm/min	BH3-15mm/min	BH3-15mm/min	BH3-30mm/min	BH3-30mm/min
FH3-30mm/min	FH3-30mm/min	FH3-30mm/min	FH3-30mm/min	FH3-40mm/min	FH3-40mm/min
+	+	+	+	+	+
2500	2400	2800	3000	6200	6000
50	50	58	60	85*	90*
3	3	3	3	2*	2*
			1900	3500	3500
78	78	90	100	110	130
	950	950	950	1400	1600
	170/80	120/55	90/50	20/20	20/20
200/90	200/100	150/100	140/80	20/20	25/25
	30/13	20/8	13/6	5/5	5/5
18/8	22/9	12/6	9/3	5/4	5/4
210	340	240	180	60	70
	95	115	120	150	160
	98/104	104/109	106/112	104/107	111/117
/102	114/104	119/109	120/114	/107	/116
80	85	90	95	85	100
8-11	8-11	8-11	8-11	3.5	3
0.17	0.17	0.17	0.17	0.19	0.19
/2.9	/2.9	3.1/3	3.1/3	3.6/3.4	3.6/3.4
/0.01	0.016/0.014	0.014/0.013	0.005/0.01	0.008/0.017	0.005/0.01
10 <sup>-15</sup> /10 <sup>-13</sup>	10 <sup>-15</sup> /10 <sup>-13</sup>	10 <sup>-14</sup> /10 <sup>-13</sup>	10 <sup>-15</sup> /10 <sup>-13</sup>	10 <sup>-14</sup> /10 <sup>-13</sup>	10 <sup>-14</sup> /10 <sup>-13</sup>
85	85	85	85	85	85
CTI 600/CTI 275 M	CTI 600/CTI 350 (300) M	CTI 600/CTI 300 M	CTI 600/CTI 300 M	CTI 600/CTI 550 M	CTI 600/CTI 525(475)M
Easy-flow injection-molding product with high resistance to heat deformation and good impact resistance.	Injection-molding product with high resistance to heat deformation and impact; eminently suitable for automobile interior trim.	Injection-molding product with high resistance to heat deformation and impact.	The product with the greatest resistance to heat deformation. Has great rigidity and medium impact resistance.	Glass-reinforced product with very great rigidity and high resistance to heat deformation.	Glass-reinforced product with very great rigidity and utmost resistance to heat deformation.