

Toughened Acrylic Polymer Lucite® Diakon® ST45G8

PROPERTY	TEST METHOD	UNITS	VALUE
THERMAL			
Melt Flow Index	ISO 1133	gms/10mins	1.3
Vicat Softening Point	ISO 306A	°C	108
	ISO 306B	°C	93
Heat Deflection Temperature	ISO 75A	°C	92
Coefficient of Expansion	ASTM E831	cm/cm/°C x 10 ⁻⁵	12
OPTICAL			
Light Transmission	ASTM D1003	%	90
Haze	ASTM D1003	%	3.0
Refractive Index	ISO 489	-	1.49
MECHANICAL			
Tensile Strength	ISO 527	MPa	45
Elongation	ISO 527	%	35
Flexural modulus	ISO 178	GPa	1.7
Flexural Strength	ISO 178	MPa	60
Izod Impact Strength	ISO 180/1A	kJ/m ²	7.5
Charpy Impact Strength	ISO 179/1eA	kJ/m ²	8.0
	ISO 179/1eU	kJ/m ²	78
GENERAL			
Relative Density	ISO 1183	-	1.15
Rockwell Hardness	ISO 2039-2	M Scale	35
Mould Shrinkage	-	%	0.4-0.8
Water Absorption	ISO 62	%	0.36
Flammability	UL94	-	HB
Glow Wire Test	IEC 695-2-1	°C	650

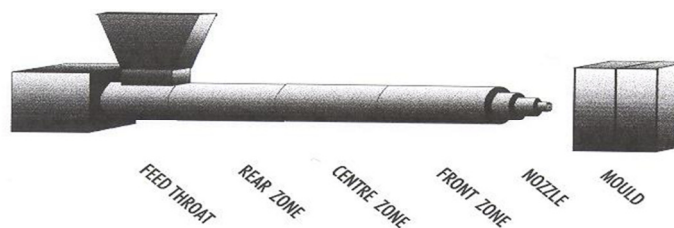
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Users of Lucite Diakon polymer should consult the relevant Material Safety Data Sheet
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DIAKON® ELVAKON® TUFLOAT® ACRYPET®

Suggested temperature profile for Injection Moulding Lucite® Diakon® ST45G8

°C	FEED THROAT	REAR ZONE	CENTRE ZONE	FRONT ZONE	NOZZLE	MOULD
300						
290						
280				Blue		
270				Blue	Blue	
260			Blue	Blue	Blue	
250			Blue	Yellow	Blue	
240		Blue	Yellow	Blue	Yellow	
230		Yellow	Blue	Blue	Blue	
220		Blue	Blue	Blue	Blue	
210		Blue	Blue			
200		Blue				
190						
180						
170						
160						
150						
100						
90						
80	Blue					
70	Blue					Blue
60	Yellow					Blue
50	Blue					Yellow
40						Blue
30						



Suggested moulding temperature limits
 Average moulding conditions

Drying Conditions
DIAKON® ELVAKON® TUFLOAT® ACRYPET®

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The material should be dried in either an air circulating oven, a continuous hot air dryer or ideally a dehumidified air dryer at 80°C for 3 to 4 hours.