

Acrylic Polymer Lucite® Diakon® CMH454

PROPERTY	TEST METHOD	UNITS	VALUE
THERMAL			
Melt Flow Index	ISO 1133	gms/10mins	0.8
Vicat Softening Point	ISO 306A	°C	115
	ISO 306B	°C	108
Heat Deflection Temperature	ISO 75A	°C	102
	ISO 75B	°C	106
Coefficient of Expansion	ASTM E831	cm/cm/°C x 10 ⁻⁵	7.1
OPTICAL (2mm)			
Light Transmission	ASTM D1003	%	92
Haze	ASTM D1003	%	0.4
Refractive Index	ISO 489	-	1.49
MECHANICAL			
Tensile Strength	ISO 527	MPa	85
Elongation Flexural	ISO 527	%	5
Modulus Flexural	ISO 178	GPa	3.4
Strength	ISO 178	MPa	120
Izod Impact Strength	ISO 180/1A	kJ/m ²	2.2
Charpy Impact Strength	ISO 179/1eA	kJ/m ²	2.2
	ISO 179/1eU	kJ/m ²	26
GENERAL			
Relative Density	ISO 1183	-	1.18
Rockwell Hardness	ISO 2039-2	M Scale	99
Ball Indentation Hardness	ISO 2039-1	MPa	190
	(H 961/30)		
Mould Shrinkage	-	%	0.4-0.7
Water Absorption	ISO 62	%	0.30
Flammability	UL94	-	HB
Glow Wire Test	IEC 695-2-1	°C	650

The above data represents typical results obtained using standard test pieces, it should not form the basis of specifications. Information contained in this publication (and otherwise supplied to users) is based on our general experience and is given in good faith, but we are unable to guarantee its accuracy or to accept responsibility in respect of factors outside our knowledge or control. Freedom under patent, copyright and registered designs cannot be assumed.

Users of Lucite Diakon polymer should consult the relevant Material Safety Data Sheet.

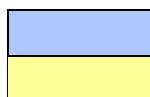
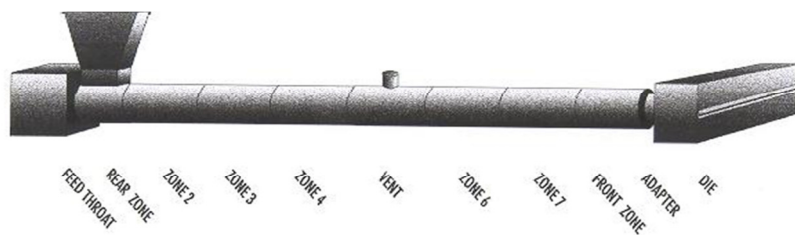
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DIAKON® ELVAKON® TUFLOAT® ACRYPET®

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Suggested temperature profile for Extruding Lucite® Diakon® CMH454

°C	Feed Throat	Feed Zone	Zone 2	Zone 3	Zone 4	Vent Zone	Zone 6	Zone 7	Zone 8	Adapter	Die
300											
290											
280											
270											
260											
250											
240											
230											
220											
210											
200											
190											
180											
170											
160											
150											
100											
90											
80											
70											
60											
50											
40											



Suggested extrusion temperature limits
Average extrusion temperatures

Drying Conditions

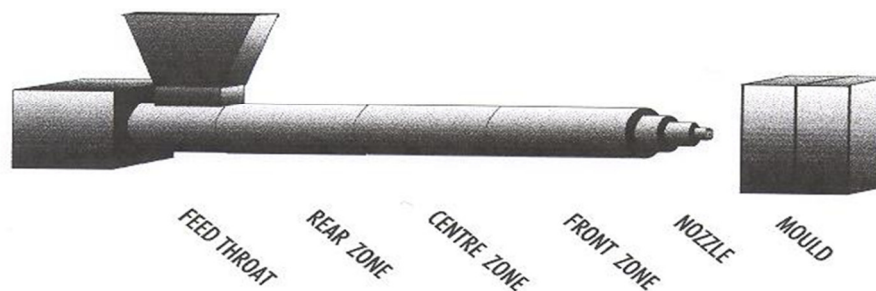
The material may be extruded without pre-drying using a well designed, vented extruder. The material will require pre-drying on a non-vented extruder. It is recommended using a dehumidified air dryer at 80°C for 3 to 4 hours.

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Suggested temperature profile for Injection Moulding Lucite® Diakon® CMH454

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



Suggested moulding temperature limits

Average moulding conditions

Drying Conditions

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.

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