Lab 850 (Tooling Board)

Abrasion Resistant for Foundry Applications

PHYSICAL PROPERTIES			
Color		red	
Density at 73°F (23°C)	ISO 2781 : 1996	Lbs/ft^3 (g/cc)	74 (1.18)

MECHANICAL PROPERTIES at 73°F (23°C)			
Hardness - at 73°F (23°C - at 176°F (80°C)	ISO 868 :2003	Shore D1 / D15	80 / 78 55 / -
Flexural modulus	ISO 178 : 2001	psi (MPa)	203,000 (1,400)
Flexural strength	ISO 178 :2001	psi (MPa)	8,300 (57)
Tensile modulus	ISO 527 :1993	psi (MPa)	218,000 (1,500)
Tensile strength	ISO 527 :1993	psi (MPa)	8,300 (35)
Elongation at break	ISO 527 : 1993	%	35
Compressive strength	ISO 604 :2002	psi (MPa)	5,900 (41)
Impact strength (CHARPY) *Unnotched specimens*	ISO 179/1eU :1994	ft.lbf/in^2 (kJ/m$^{2)}$	34 (72)
Abrasion loss	ISO 5470-1 : 1999	in^3 (mm^3)	0.006 (93)
Glass transition temperature (Tg)	ISO 11359 : 2002	°F (°C)	176 (80)
Coefficient of thermal expansion (CTE) 50 – 140°F (10 - 60°C)	ISO 11359 : 1999	ppm/°F (°C)	53 (95)

MACHINING PARAMETERS		
	Cutter edge velocity (Vc in ft/min or (m/min))	Feed per tooth (fz in in or mm/revolution)
Rough shape	328 – 1312 (100 – 400)	0.021 (0.53)
Finish	1312 (400)	0.002 (0.06)

n = ((12 English or 1000 metric) X Vc) / (PI X Dc)	Vf = n X fz X Z

- *Vc: Cutter edge velocity in ft/min or (m/min)*
- *Dc: cutting diameter in in or (mm)*
- *n: Spindle speed in revolution/min*
- *fz: Feed per tooth in in or mm/revolution*
- *Z: number of teeth*
- *Vf: feed speed in in or mm/min*

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