NECUMER
SOLID SOLUTIONS

NECURON® 1060

POLYURETHANE BOARD MATERIAL - TECHNICAL DATA SHEET

CHARACTERISTICS

- EXTREMELY HIGH ABRASION RESISTANCE
- VERY HIGH FLEXURAL AND COMPRESSIVE STRENGTH
- VERY LOW COEFFICIENT OF THERMAL EXPANSION
- VERY HIGH TEMPERATURE RESISTANCE

APPLICATIONS

- FOUNDRY MODELS REQUIRING HIGH MECHANICAL VALUES FOR A HIGH NUMBER OF SHOTS
- CORE BOXES
- RIM-TOOLS
- SHEET METAL FORMING TOOLS
- GAUGES
- HAMMER FORM AND FLANGING TOOLS

DIMENSIONS

BASIC FORMAT (MM)	AVAILABLE HEIGHTS (MM)
1,000 x 500	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 75, 100

Other dimensions on request.
Surfaces machined parallel.

TECHNICAL DATA

Colour	green	visual
Coefficient of thermal expansion	approx. 43 x 10-6 K-1	DIN 53752-B
Temperature resistance	approx. 95 -100 °C	ISO 75
Shore D	approx. 84	ISO 868
Compressive strength	approx. 100 N/mm^2	DIN 53421
Flexural strength	approx. 107 N/mm^2	ISO 178
Density	approx. 1.27 g/cm^3	ISO 845
Abrasion resistance (at defined parameters)	approx. 280 mm^3	DIN ISO 4649
Fire protection classification	-	DIN 4102
Electrical current resistance	approx. - Ω x cm	IEC 93
Notched impact strength	approx. - kJ/m^2	ISO 179-1
Thermal conductivity	approx. - W/mk	DIN 52612
Modulus of elasticity	approx. 2,750 MPa	ISO 178

Contains no halogens, plasticizer or solvent. Manufactured fluorocarbohydrate-free. Physiologically harmless.

PROCESSING

ADHESIVE	COLOUR	MIXTURE RATIO A TO B (BY WEIGHT)	POT LIFE IN MINUTES AT 20°C	CURING TIME AT 20°C
NECURON® K0	CREAM	1:1	2-3	25-30 MIN
NECURON® K8N	AMBER	1:0,5	10	5 HRS

- *Or usual and compatible patternmaking adhesives/resins. We recommend that boards are plane-parallel to ensure good glue joints.*

MACHINING

Machining temperature: 20°C - 25°C
Tools: Metal-cutting tools

Machining polyurethane boards with a laser may produce (depending on the processing temperature) visible sooty decomposition products, water vapor and carbon dioxide as well as carbon monoxide and nitrogenous compounds, including nitrogen oxides and traces of hydrogen cyanide and isocyanate vapors.

MILLING PARAMETERS

PARAMETERS	ROUGHING	FINISHING
Type of tool	Finishing tools d=80mm	Finishing tools d=80mm
Tool diameter [d] (mm)	80	80
Cutting speed [Vc] (m/sek)	50	50
Speed [n] (1/min)	12000	8000
Feed speed (m/min)	7.5	5
Tooth speed [fz] (mm)	0.16	0.16
Number of teeth [z]	4	4
Cutting depth [ae] (mm)	3	0.5
Cutter mark length [fzeff] (mm)	38	5-10

STORAGE/TRANSPORT

NECURON®-boards should be stored on a flat underground and in a dry space at a temperature between 18°C and 25°C.

Variations in temperature should be avoided during transport and storage.

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This material does not contain any fillers that release harmful dust during machining. Nevertheless the dust content in the air should not rise above 6 mg/m³. Safety procedures recommended by the vocational co-operative of the chemical industry should be complied with. The article is not a regulatory product according to ICC regulations. In accordance with general local and national regulations waste is to be disposed by incineration in authorised places or conveyed to authorised tips (EAK 120105). Technical statements and recommendations refer to current standard of technique and are based on our own experience. Further developments and improvements are reserved. Due to the variety of processing possibilities own experiments are recommended to optimise results.

This data sheet is not legally binding. Actual specifications and / or features may vary.

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