

# CPU 0800 to 1600



## POLYURETHAN

### DATA SHEET (08.08.2022)

#### APPLICATION AREAS

- Blank density from 0.80 to 1.60 g/cm<sup>3</sup>
- Near-net-shape blanks for mold and gauge construction (also with low wall thickness)
- Model blocks for autoclave tools
- Subsequent changes are very easy to implement with block materials
- finished surfaces

#### PRODUCT ADVANTAGES

- good machinability
- low dust generation
- good surface after machining
- very fine, closed surface
- good compressive and flexural strength
- Dimensionally stable and high edge strength
- high abrasion resistance and impact strength

#### DESCRIPTION

- Base polyurethane, light brown

Mechanical properties (approx. Values)			CPU - LD		CPU - HD	
			CPU - 0800	CPU - 1000	CPU - 1200	CPU - 1600
Density	ISO 845	g/cm <sup>3</sup>	0,80	1,00	1,20	1,60
Shore hardness	ISO 868	-	D 67	D 76	D 84	D 87
Modulus of elasticity	ISO 178	MPa	1.300	2.100	2.600	5.900
Flexural strength	ISO 178	MPa	30	50	105	70
Compressive strength	ISO 604	MPa	29*	47*	81*	88*
Heat resistance	ISO75B	°C	58	65	79	78
WAK <sub>αT</sub>	DIN 53 75	K <sup>-1</sup>	78 x 10 <sup>-6</sup>	78 x 10 <sup>-6</sup>	80 x 10 <sup>-6</sup>	55 x 10 <sup>-6</sup>

\* at 10% compression

#### Milling parameters

Milling steps	1.	2.	3.	4.	5.	6.	7.
Strategy	Roughing Z-constant	Restmaterial Z-constant	Restmaterial Z-constant	Restmaterial Z-constant	Finishing flat areas	Finishing Z-constant	Finishing rest material shapes
Milling cutter type	Torus cutter	Torus copying cutter	Ball nose copying cutter	Ball nose copying cutter	Torus copying cutter	Ball nose copying cutter	Solid carbide ball nose cutter
Diameter [mm]	42	20	12	6	8	8	4
Number of teeth	3	2	2	2	2	2	2
Radius [mm]	3	4	6	3	1	4	2
Cutting speed (Vc) [m/min]	500	500	600	300	400	400	200
Revolutions [1/min]	3.800	8.000	16.000	16.000	16.000	16.000	16.000
Feedrate per tooth [mm]	0,5	0,5	0,2	0,15	0,12	0,12	0,12
Feed rate (Vf) [mm/min]	5.700	8.000	6.400	4.800	3.800	3.800	3.800
Cutting depth (ap) [mm]	3	2	1	0,3	0,3	0,3	0,1
Cutting Width / Line spacing (ae) [mm]	30	10	2	0,5	4	0,3	0,1

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#### DELIVERY METHOD

Delivery is made as a contour-cast mold block on a pallet.

#### PROCESSING INFORMATION

CPU block materials are a compact, homogeneous material. Wet milling is possible as well as the use as a direct tool. If a repair should become necessary due to processing errors, it is possible to work with the polyurethane repair pastes available on the market.

#### STORAGE

We recommend storing the material dry, at room temperature and in the original packaging.

#### PRECAUTIONS

On the basis of the current safety data sheets, which contain physical, ecological, toxicological and other safety-related data, the user can inform himself about the safe handling and storage of the products.

#### PRODUCT FEATURES

Minor deviations of the product from the submitted model, in particular in shape, dimension, color, weight, shall be deemed approved in advance, for example in the case of deviations in the range of -5/+10 millimeters, e.g. due to pores arising during casting due to natural shrinkage processes or if the deviation otherwise has no relevant influence on the suitability of the product.

#### GENERAL

Our technical application advice is given verbally, in writing and by means of tests according to the current state of our knowledge. However, it does not release the customer / user from the obligation to test the products supplied by us for their products supplied by us as to their suitability for the intended processes and purposes. Application, use and processing of the products are beyond our control and are therefore the sole responsibility of the processor. Any existing industrial property rights of third parties must be taken into account. We guarantee the perfect quality of our products in accordance with our General Terms and Conditions. When handling our products, the industrial hygiene and legal regulations must be observed. In addition, we refer to the corresponding safety data sheets.

## FACTS & ADVANTAGES



#### Gogreen

sustainable process  
with minimal waste. No auxiliaries such as polystyrene moulding



#### Tempering

almost tension-free  
through subsequent  
heat treatment



#### High quality

From one piece - no plate gluing,  
high optical and  
mechanical quality



#### Material savings

up to 40%  
(to conventional methods)



#### Suitable for autoclaves

up to 55°C / 7bar  
(at density 1,6 g/cm<sup>3</sup>)



#### Fast delivery

Delivery time from 3  
days (within DE and AT)