

CPU-HD 1200 bis 1850



POLYURETHAN

DATASHEET (V1, 28.04.2021)

APPLICATION AREAS

- Variable blank density from 1.20 to 1.85 g/cm³
- Near-net-shape blanks for mould and jig making as well as models, also available with thin walls
- Lower density range: front layers for sheet metal drawing tools and foundry patterns
- Medium density range: tapping patterns, gauges, vacuum forming moulds, foundry patterns, RIM tools
- Upper density range: backfill and cores for sheet metal drawing tools and foundry patterns, gauges, RIM tools, series casting of finished parts

PRODUCT ADVANTAGES

- Good machinability
- Low dust formation
- Good surface after machining
- Very fine, closed surface
- Good compressive and flexural strengths
- Dimensionally stable with high edge strength
- High abrasion resistance and impact strength
- Good sliding coefficient
- Subsequent changes are very easy to realise with additional **SikaBiresin**[®] block materials

DESCRIPTION

- Basis polyurethane, opaque (unfilled, density = 1.20 g/cm³) or beige (density > 1.30 g/cm³)

Mechanical properties (approx. Values)

			CPU-HD 1200	CPU-HD 1600	CPU-HD 1700	CPU-HD 1850
Density	ISO 845	g/cm ³	1,20	1,60	1,70	1,85
Shore hardness	ISO 868	-	D 84	D 87	D 89	D 89
Modulus of elasticity	ISO 178	MPa	2.600	5.900	7.700	9.200
Flexural strength	ISO 178	MPa	105	70	65	60
Compressive strength	ISO 604	MPa	81*	88*	88*	87*
Heat resistance	ISO75B	°C	79	78	78	77
WAK _{aT}	DIN 53 752	K ⁻¹	80 x 10 ⁻⁶	55 x 10 ⁻⁶	45 x 10 ⁻⁶	40 x 10 ⁻⁶

* 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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FORM OF DELIVERY

Delivery takes place as a contour-cast mould block on a Euro pallet.

PROCESSING INSTRUCTIONS

CPU block materials are a compact, homogeneous material. Wet milling is possible, as is the use as a direct tool. Should a repair become necessary due to processing errors, commercially available polyurethane repair pastes can be used.

STORAGE

We recommend storing the material at room temperature in dry conditions and in the original packaging. Precautions The user can inform themselves about the safe handling and storage of the products by referring to the current safety data sheets, which contain physical, ecological, toxicological and other safety-related data.

PRODUCT FEATURES

Minor deviations of the product from the submitted model, in particular in shape, dimension, colour, weight, shall be deemed approved in advance, for example in the case of deviations in the range of -5/+10 millimetres, e.g. due to pores arising during casting as a result of 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 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. Additionally, we refer to the corresponding safety data sheets.

FACTS & ADVANTAGES



Gogreen

sustainable process
with minimal waste. No auxilia-
ries 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