CENTROLAB HT™

Engineering plastic at high temperature resistance

Centroplast
Engineering Plastics GmbH

CENTROLAB HT™ / PP-HT

Custom-made plastic for applications at high temperatures

CENTROLAB HT™ is an innovative polypropylene based compound material, which closed the gap between polyolefines and engineering thermoplastics due to its material characteristics.
Special admixtures make our CENTROLAB HT™, tested successfully by the C.R.I.T.T. institute for sterilization and decontamination, especially suitable for **use in temperature fields up to 140 °C** at high mechanical stress.

PROPERTIES / ADVANTAGES

- Exceptional dimensional stability and heat resistance especially at temperatures up to 140 °C
- High chemical resistance
- High mechanical load-bearing capacity
- Acid resistant
- No water absorption
- High hardness, rigidity and strength
- Good friction and wear behaviour
- Excellent electronic insulating properties
- Low density
- Autoclavable
- Steam sterilisation
- Compliant to foodstuff regulations according to BfR/FDA

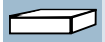
FIELD OF USE

- Automotive industry
- Beverage bottling industry
- Electrical industry
- Food stuff industry
- Mechanical engineering
- Medical technology
- Pharmaceutical industry
- Plastics industry

FIELD OF APPLICATION

- High loaded sliding elements
- Pump elements
- Sterilizing units
- Chemical container and plant construction
- Containers, trays and handles
- Analytical devices / laboratory outfits

DELIVERY PROGRAM

	**Rods**	**length (mm)**	tolerance length			**diameter (mm)**	diameter tolerance (mm)
		1000 3000	0% to +3%			10 to 100	+0,1 / +0,6 to +0,6 / +3,8
	**Tubes**						
		on request					
	**Plates**	**length (mm)**	tolerance length	**width (mm)**	tolerance width	**thickness (mm)**	thickness tolerance (mm)
		1000 3000	0% to +3%	500	+1% to +4%	10 to 60	+0,2 / +0,9 to +0,5 / +3,5

For updates please refer to www.centroplast.de

MATERIAL PROPERTIES

	Property		Method of verification	Unit	CENTROLAB HT™ PP-HT white
physical	**Density**		ISO 1183	g/cm³	0,93
	Moisture pick-up till saturation (in normal climate 23°C/50% r.h.)		ISO 62	%	-
	Water absorption till saturation (in water at 23 °C)		ISO 62	%	-
	Food compliance		BfR(1) / FDA(2)		yes / yes
mechanical	**Tensile stress at yield** [v = 50 mm/min] / **Tensile stress at break** [v = 5 mm/min]		ISO 527-2	MPa	33 / -
	Nominal percentage elongation at break		ISO 527-2	%	25
	Tensile modulus of elasticity		ISO 527-2	MPa	1400
	Flexural modulus of elasticity		ISO 178	MPa	1150
	Ball indentation hardness (value at 30 sec.)		ISO 2039-1	MPa	-
	Impact strength (+23 °C)		DIN 53453	kJ/m²	8
	Impact strength - notched (+23 °C)		DIN 53453	kJ/m²	6
thermal	**Temperature for usage in air**	(max. short term) (max. lasting)		°C °C	140 105
	Minimum service temperature in air			°C	-
	heat distortion temperature (HDT A process)		ISO 75-2	°C	80 150
	Coefficient of linear expansion (at length, 23-60 °C)		DIN 53752	$10^{-4/K}$	0,86
	Thermal conductivity (+23 °C)		DIN 52612	W/(K*m)	-
	Flammability according UL Standard		UL 94	Class	HB
	Vicat softening temperature (VST/B/50)		ISO 306	°C	98
	Melting point (DSC, 10 K/min)		ISO 3146	°C	166
electric	**Specific insulation resistance**		IEC 60093	Ohm * m	-
	Specific surface resistance		IEC 60093	Ohm	-
	Dielectric constant	at 1 MHz (1) at 100 Hz (1)	IEC 60250 IEC 60250	10^6 Hz 10^2 Hz	- 2,3
	Dissipation factor	at 1 MHz (1) at 100 Hz (1)	IEC 60250 IEC 60250	10^6 Hz 10^2 Hz	- 0,0004
	Dielectric strength K20/K20 (1) (in transformer oil)		IEC 60243-1	kV/mm	> 80
	Comparative tracking index (CTI)		IEC 60112		≥ 600

values for dry material [deviations are possible for saturated material]

1g/cm³ = 1000 kg/m³;
1 MPa = 1 N/mm²;

PLEASE NOTE:
The data is based on average values provided by our raw material suppliers, or our own measurements and correspond to our latest state of knowledge. Specifications may change with different raw material suppliers, but all necessary checks are made. The suitability of the products for a special application can not be guarenteed legally binding. All data is approximate and for general information (errors and misprints excepted). They do not represent guaranteed property values and they should not be used for specification purposes, or as general construction fundamentals. They do not relieve customers from the necessity of checking for suitability.

(1) values do not apply to black colored qualities

(2) values do also apply to black colored qualities

n.br. = without break
n.a. = not applicable
o.r. = on request

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