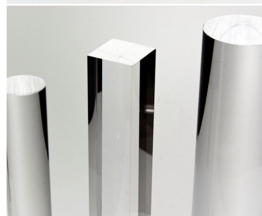
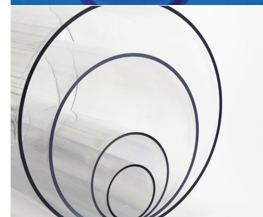
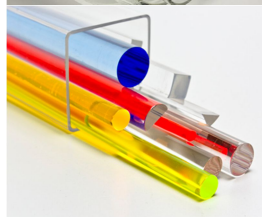




GEVACRIL®

Sales Handbook

2019



Technical Properties

Typical property values
(at 20° C and 50% relative humidity)

Mechanical Properties	NORM1	Unit	Cast	Extruded	Polycarbonate
Specific weight	DIN 53479	gr/cm ³	1,19	1,19	1,20
Impact strength (Charpy)	DIN 53453	kJ/m ²	15	15	65
Notched impact strength (Izod)	DIN 53453	kJ/m ²	1,6	1,6	4,5
Tensile strength (Charpy)	D638	Mpa			
-40°C			110	100	-
20°C			80	70	50
70°C			40	35	-
Elongation at break	DIN 53455	%	5,5	4,5	-
Flexural strength (st. test specimen 80x10x4 mm ³)	D790	Mpa	115	105	100
Compressive yield stress	-	MPa	110	103	-
Max safety stress (up to 40° C)	-	Mpa	5 ... 10	5 ... 10	5 ... 10
Modulus of elasticity (short-term value)	D790	MPa	3300	3300	2300
Indentation hardness H _{961/30}	DIN 53456	MPa	175	175	110
Abrasion resistance in Taber abrader test (100 rev.; 5,4 N; CS-10F)	-	% Haze	20 ... 30	20 ... 30	30 ... 40
Coefficient of friction μ	-	-			
a) plastic/plastic			0,8	0,8	-
b) plastic/steel			0,5	0,5	-
c) steel/plastic			0,45	0,45	-
Poisson's ratio μ_b (dilatation speed of 5%/min; up to 2% dilatation; at 20°C)	-	-	0,37	0,37	-
Resistance to puck impact from thickness (FMPA Stuttgart – Germany)	similar to DIN 18032	-	12 mm	8 mm	-
Sound velocity	-	m/s	2700 ... 2800	2700 ... 2800	-

¹ The norms indicated in this table are taken from: a) DIN: German Society for Standardisation; b) D (or ASTM): American Society for Testing Materials.

Weight sounded reduction index R_w at thickness	-	dB			
4 mm			26	26	-
6 mm			30	30	-
10 mm			32	32	-
Optical Properties					
Transmittance T_{D65}	DIN 5036	%	~ 92	~ 92	~ 88
UV transmission	-	-	yes	yes	yes
Reflection loss the visible range (each surface)	-	%	4	4	4
Adsorption in the visible range	-	%	<0,05	<0,05	-
Refractive index n_D^{20}	-	-	1,491	1,491	-
ELECTRICAL PROPERTIES					
Volume resistivity	DIN VDE 0303	ohm . cm	>1015	>1015	>1017
Dielectric strength (1 mm specimen thickness)	DIN VDE 0303	kV/mm	~ 30	~ 30	-
Dielectric constant at 50 MHz	DIN 53483	-	3.6	3.7	-
at 0,1 MHz			2.7	2.8	
Dielectric loss factor at 50 MHz	DIN 53483	-	0.06	0.06	-
at 0,1 MHz			0.02	0.03	
THERMAL PROPERTIES					
Coefficient of linear thermal expansion	DIN 53752	mm/m ° C	0,7	0,7	0,65
Possible expansion to heat and moisture	-	mm/m	5	5	6
Thermal conductivity at 20°C	DIN 52612	W/(mK)	0,19	0,19	-
U-value for thickness:	DIN 4701	W/m ² K			
1 mm.			5,8	5,8	-
3 mm.			5,6	5,6	-
5 mm.			5,3	5,3	-
10 mm.			4,4	4,4	-
Specific Heat	-	J/gK	1,47	1,47	-
Forming temperature	-	°C	160 ... 175	150 ... 160	160 ... 180
Max. surface temperature (IR radiator)	-	°C	200	180	-
Max. service temperature (without mech. stress)	-	°C	80	70	120

Ignitiontemperature	DIN 51794	°C	425	430	-
Fire rating (material thickness > 2 mm.)	DIN 4102	-	B2, normalflammmable	B2, normalflammmable	B2, normalflammmable
Heat deflection temperature under load (HDT)	-	°C			-
deflection 1,8 MPa			105	90	
deflection 0,45 MPa			113	95	
Behavior Towards Water					
Water absorption (24 h. 20° C) from dry state; specimen 60 x 60 x 2 mm3	DIN 53495	mg	41	38	45
Max weight gain during immersion	DIN 53495	%	2,1	2,1	2,1

The technical advices for the use of our materials are typical values supplied in accordance with our tests and with the regular commercially acceptable standards. They are given without any obligation. The buyer is responsible for the application and processing of our products and is also liable for observing any third party rights.