



PRODUKTÜBERSICHT

PRODUCT DATA



Vakuumgießen Materialien
Silikonkautschuke, Vakuum-
Gießharze und Nylon,
PA 6 Werkstoffe

Vacuum Casting Materials
Silicon Rubbers, Vaccum Casting Resins
and Nylon, PA 6 Materials

TEST TYPE ISO	7140	7150	8020	6120	7160	9070	7170	7180	7190	6130	8040	2155	6020	SG 95 ***	8095 ***	6091	8052	FR 350										
Properties / Eigenschaften	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—										
soft / weich	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—										
semi rigid / halbhart	—	—	—	—	—	—	—	—	—	—	●	●	—	—	—	—	—	—										
rigid / hart	—	—	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●										
high temperature / hochtemperaturbeständig	—	—	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	—										
others / sonstige	—	—	—	—	—	—	—	—	—	—	—	—	—	—	UV stable	UV stable	—	UL-VO & FAR 25 UL94VO										
Product Colour / Produktfarbe	water clear / transparent	water clear / transparent	semi-clear translucent / durchscheinend	milky-white / milchig-weiß	water clear / transparent	water clear / transparent	water clear / transparent	water clear / transparent	water clear / transparent	milky-white / milchig-weiß	milky-white / milchig-weiß	semi-black translucent / schwarz durchscheinend	white / weiß	water clear / transparent	water clear / transparent	water clear / transparent	white / weiß	white / weiß										
Hardness (Shore A/D) / Härte (Shore A/D) @23 °C	868	868	868	868	868	868	868	868	868	868	868	868	868	868	868	868	868	868										
Flexural Modulus (MPa) / Biegemodul, E-Modul (MPa)	178	178	178	178	178	178	178	178	178	178	1050	700	1395	2195	2460	2835	2000	3500										
Flexural Strength (MPa) / Biegefestigkeit (MPa)	178	178	178	178	178	178	178	178	178	178	42	30	62,1	88.6	108	101	93	107										
Tensile Modulus (MPa) / Zug-E-Modul (MPa)	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	942	805	1295	2521	2250	2220	2140	3500										
Tensile Strength (MPa) / Zugfestigkeit (MPa)	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	1,29	2,04	5 - 8	5.8	2.9	4.3	4.6	5	7.7	5.8	27	25,2	35,5	54.0	64	58.9	57	64
Heat Deflection Temp. °C(HDT) / Wärmebeständigkeit °C(HDT)	75	75	75	75	75	75	75	75	75	75	65	97	80	72	77	75	* 85-110	84										
Glass Transition Temp. °C (Tg) / Glasübergangstemp. °C (Tg)	—	—	—	—	—	—	—	—	—	—	78	120	95	85	88	90	112	87										
Elongation Yield (%) / Dehnung (%)	222	228	—	—	243	—	278	160	125	—	—	—	6,5	6	—	6,5	10	—										
Elongation at Break (%) / Bruchdehnung (%)	R 527	R 527	600 - 200	300	—	255	—	—	—	200	50	125	21	12	17	11	20	3										
Tear Strength (MPa) / Reißfestigkeit (MPa)	34	34	34	34	34	34	34	34	34	34	8,9	10,3	11 - 12	22	10,3	20	15	15,5	23	60	—	—	—	—	—	—	—	
Yield Strength (MPa) / Streckgrenze (MPa)	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	R 527	—	—	40,2	64.2	—	69.8	—	—										
Izod Impact (kJ/m2) / Kerbschlagzähigkeit (kJ/m2)	180	180	180	180	180	180	180	180	180	180	—	—	15.0	22.9	4.1	8.9	11	7.3	11	12								
Thermal Conductivity (W/mK) / Wärmeleitfähigkeit (W/mK)	BS 874	BS 874	BS 874	BS 874	BS 874	BS 874	BS 874	BS 874	BS 874	BS 874	—	—	0,194	0,208	0,208	0,208	0,225	—										
Density / Dichte (kg/dm ³ @ 23 °C)	1.03	1.03	1.03	0,99	1.03	0,98	1.03	1.03	1.03	1,11	1.05	1.16	1.00	1,07	1.05	1.10	1.10	1.19										
Part A / Komp. A	1.03	1.03	1.03	0,99	1.03	0,98	1.03	1.03	1.03	1,11	1.05	1.16	1.00	1,07	1.05	1.10	1.10	1.19										
Part B / Komp. B	1.14	1.14	1,12	1,14	1,14	1,18	1,14	1,14	1,14	1,14	1,22	1,09	1,18	1,19	1,20	1,09	1,19	1,23										
Viscosity / Viskosität (cPs @ 23 °C)	400	400	550	1000	400	1000	400	900	900	400	1200	160	200	1300	700	800	850	3500-4500										
Part A / Komp. A	400	400	550	1000	400	1000	400	900	900	400	1200	160	200	1300	700	800	850	3500-4500										
Part B / Komp. B	285	285	500	40	285	160	285	285	285	40	140	3000	40	130	140	160	180	180-240										
Mixing Ratio by weight (A : B) / Mischungsverhältnis nach Gewicht (A : B)	100:38	100:57	100:75-90	100:40	100:69	100:50	100:79	100:78	100:92	100:100	100:82	32:100	100:100	100:150	100:150	100:180	100:200	100:90										
Pot Life: sec. (100 g @ 23 °C) / Topfzeit: sek.(100 g @ 23 °C)	400	400	270 - 300	360	400	240	400	400	400	360	300	420	110	300	360	460	330	300-400										
Pot Life: min. (100 g @ 23 °C) / Topfzeit: min.(100 g @ 23 °C)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
Curing Time / Aushärtezeit (@ 23 °C) min.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
Demoulding Time / Entformungszeit (@ 70 °C) min.	90	90	90 - 120	45 - 100	90	180	90	90	90	45 - 100	100	40 - 60	45	45	45	120	20 - 30	120										
Shrinkage (%) According to Wall Thickness / Schrumpf (%) Nach Schichtdicke	—	0.2	0.2	0.4-0.6	0.2	0.3	0.2	0.2	0.3	0.4 - 0.6	0.4	0.3	0.6 - 0.8	0.2	0.3	0.7	0.2 - 0.3	0.2										

** Data without post curing. / Daten ohne durchgeführte Wärmebehandlung.

FDA accepted: For dry food use „foodsafef“. / FDA zugelassen: Für Anwendungen mit trockenen Lebensmitteln „Lebensmittelecht“.

For more detailed product information, see our „Handling Instructions“ Data Sheets. / Für detailliertere Produktinformationen lesen Sie bitte unsere Merkblätter „Verarbeitungshinweise“.

Vacuum Casting Resins / Vakuum-Gießharze

Silicon Rubbers / Silikonkautschuke

Nylon PA 6 Materials

TEST TYPE ISO	8060 HT - 1	8060 HT - 2	8060 HT - 3	8060 HT - 4	2185	2186	9011	VTV 750	VTV 800	VTV 850 Cat 850	VTV 850 Cat 851	VTX 950	VTX 5900	VTN 4500	PA 3000	PA 2000	PA 1000	PA 700	
Properties / Eigenschaften	soft / weich	—	—	—	—	—	—	•	•	•	•	•	—	—	—	—	—	—	
	semi rigid / halbhart	—	•	—	—	—	—	—	—	—	—	—	•	•	—	—	—	•	
	rigid / hart	•	—	•	—	•	•	—	—	—	—	—	—	—	•	•	—	—	
	high temperature / hochtemperaturbeständig	•	•	•	•	•	•	—	—	—	—	—	•	•	•	•	•	•	
	others / sonstige	—	—	—	—	—	—	—	—	long mold life, low viscosity	long mold life, low viscosity	—	—	—	—	—	—	—	
Product Colour / Produktfarbe	slightly yellowish translucent / leicht gelb durchscheinend				black / schwarz	black / schwarz	white / weiß	clear transparent / durchscheinend	clear transparent / durchscheinend	clear transparent / durchscheinend	clear transparent / durchscheinend	water clear / transparent	beige	reddish-brown / rot-braun	light yellow / hellgelb	light yellow / hellgelb	light yellow / hellgelb	light yellow / hellgelb	
Hardness (Shore A/D) / Härte (Shore A/D) @23°C	868	80 D				80 D	80 D	77 D	40 A	38 A	40 A	38 A	40 A	59 A	45 A	79 D	77 D	73 D	71 D
Flexural Modulus (MPa) / Biegemodul, E-Modul (MPa)	178	1310	1010	1320	645	1500	1990	1310	—	—	—	—	—	—	2600	1950	950	750	
Flexural Strength (MPa) / Biegefestigkeit (MPa)	178	60	48	64	27	60	85	51	—	—	—	—	—	—	86	55	38	35	
Tensile Modulus (MPa) / Zug-E-Modul (MPa)	R 527	1225	—	—	750	1300	1760	—	—	—	—	—	—	—	2400	1800	850	650	
Tensile Strength (MPa) / Zugfestigkeit (MPa)	R 527	47	—	—	26	45	70	40	6.5	5.5	6.2	5.6	6.7	4.5	70	60	42	32	
Heat Deflection Temp. °C(HDT) / Wärmebeständigkeit °C(HDT)	75	* 105-175	* 90-110	* 115-180	* 45- 55	* 110-130	*	90	—	—	—	—	—	—	135	195	131	76	
Glass Transition Temp. °C (Tg) / Glasübergangstemp. °C (Tg)		127-195	105-132	125-195	70- 90	150	150	108	—	—	—	—	—	—	205	—	—	—	
Elongation Yield (%) / Dehnung (%)		—	—	—	—	32	13.5	—	—	—	—	—	—	—	—	—	—	—	
Elongation at Break (%) / Bruchdehnung (%)	R 527	43	—	—	62	33.8	13.5	25	350	320	310	330	390	250	275	25	45	> 250	> 250
Tear Strength (MPa) / Reißfestigkeit (MPa)	34	—	—	—	—	—	—	—	17	15	19	16	27	16	11	—	—	—	
Yield Strength (MPa) / Streckgrenze (MPa)	R 527	—	—	—	—	—	—	—	—	—	—	—	—	—	71	60	44	35	
Izod Impact (kJ/m2) / Kerbschlagzähigkeit (kJ/m2)	180	14	15	13	11	8.3	5.8	—	—	—	—	—	—	—	8	9	60	90	
Thermal Conductivity (W/mK) / Wärmeleitfähigkeit (W/mK)	BS 874	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.28	0.28	0.28	
Density / Dichte (kg/dm³ @ 23 °C)	Part A / Komp. A	1.03				1.13	1.13	1.10	1.09	1.10	—	—	1.10	1.30	1.12	1.16	1.14	1.14	1.14
	Part B / Komp. B	1.21				1.16	1.16	1.12	1.00	1.00	1.08	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Viscosity / Viskosität (cPs @ 23 °C)	Part A / Komp. A	220				1600	1200	—	90,000	80,000	50,000	50,000	42,000	90,000	50,000	—	—	—	—
	Part B / Komp. B	50				200	1500	—	—	—	—	—	—	—	—	—	—	—	—
Mixing Ratio by weight (A : B) Mischungsverhältnis nach Gewicht (A : B)		100:400	100:250	100:500	100:150	80:100	100:150	29:100	100:10	100:10	100:10	100:10	100:10	100:10	100:10	100:100	100:100	100:100	100:100
Pot Life: sec. (100 g @ 23 °C) / Topfzeit: sek.(100 g @ 23 °C)		285	270	330	170	330	330	3600	—	—	—	—	—	—	60	60	40	40	
Pot Life: min. (100 g @ 23 °C) / Topfzeit: min.(100 g @ 23 °C)		—	—	—	—	—	—	—	100	120	110	110	80	60	45-90	—	—	—	
Curing Time / Aushärtezeit (@ 23 °C) min.		—				—	—	—	1440 / 24	1440 / 24	1440 / 24	1440 / 24	720 / 12	1440 / 24	1440 / 24	—	—	—	—
Demoulding Time / Entformungszeit (@ 70 °C) min.		30 - 60				45	30 - 45	180	120	120	100	100	120	120	120	5	5	5	5
Shrinkage (%) According to Wall Thickness Schrumpf (%) Nach Schichtdicke		0.5				0.2	0.2	0.5 - 1.0	0.1	0.1	—	—	0.1	0.1	0.2	2.5	2.5	2.2	2.2

* The heat deflection temperature can be increased considerably by post curing the resin castings. To obtain higher heat deflection temperatures see handling instructions for each specific resin. *Die Wärmebeständigkeit kann durch Wärmebehandlung der Gießteile erhöht werden.*
Um eine höhere Wärmebeständigkeit erzielen zu können, beachten Sie bitte die Verarbeitungshinweise für den jeweiligen Gießharztyp.

** Data without post curing. *Daten ohne durchgeführte Wärmebehandlung.*

Silicone Rubbers have been specially formulated for producing vacuum castings moulds. Modifiers and fillers have been carefully chosen to guarantee longer mould life, dimensionally stable castings and exact control over shrinkage and expansion when used in the combination with Vacuum Casting Resins.

Silikonkautschuke werden speziell für das Vakuum-Gießverfahren entwickelt. Modifizierer und Füllstoffe sind sorgfältig ausgewählt worden, um eine lange Lebensdauer der Form sowie maßgenaue Abgüsse und Kontrolle über Schrumpfung und Ausdehnung in Verbindung mit Gießharzen zu garantieren.