

Polyurethane Casting Resins for Electronic Applications

RAIGITHANE (Resin)	5741	6479	7409	7600	7658	7658	8266	8601	8711	8801	9209-200	9429	23712
RAIGIDUR (Hardener)	VF	F	F	VF	L	F	L	VF	VF	VF	F	F	HR
Mixing ratio (parts by weight)	100 ± 24	100 ± 24,2	100 ± 23,5	100 ± 30	100 ± 12	100 ± 12	100 ± 50	100 ± 40	100 ± 25	100 ± 25	100 ± 36	100 ± 35	100 ± 29
Polyol viscosity	7000	2200	2500	1500	7800	7800	600	3500	3000	4000	12000	10000	1400 ± 300
Isocyanat viscosity	40	200	200	40	200	200	200	40	40	40	200	200	250 ± 40
Mixed viscosity at 25°C (mPa-s)	2800	2 000	2 000	650	9 100	8 000	450	700	800	1 000	----	6 000	----
Colour	Natural Colour	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Gel time (25°C)	75' ± 15'	6' ± 2'	8' ± 2'	45' ± 10'	32' ± 5'	32' ± 5'	60" ± 15"	30' ± 5'	60' ± 15'	100' ± 15'	180" ± 20"	8' ± 2'	12' ± 2' (Tack free time)
Density Resin (25°C)	0.90 ± 0.03	1.27 ± 0.05	1.32 ± 0.05	1.28 ± 0.05	1.46 ± 0.03	1.46 ± 0.03	1.01 ± 0.05	1.02 ± 0.05	1.51 ± 0.05	1.50 ± 0.05	1.68 ± 0.05	1.75 ± 0.05	1.02 ± 0.05
Density Hardener (25°C)	1.22 ± 0.05	1.23 ± 0.02	1.23 ± 0.02	1.22 ± 0.05	1.23 ± 0.03	1.23 ± 0.03	1.23 ± 0.05	1.22 ± 0.05	1.22 ± 0.05	1.22 ± 0.05	1.23 ± 0.03	1.22 ± 0.02	1.22 ± 0.04
Shore-Hardness A / D (25°C)	75 ShA	85 ShA	90 ShA	90 ShA	85 ShA	85 ShA	55ShD	62ShD	80ShD	82ShD	85ShD	90 ShD	----
Mixed density (25°C)	0.96 ± 0.04	1.26 ± 0.05	1.31 ± 0.05	1.32 ± 0.05	1.42 ± 0.05	1.42 ± 0.05	1.11 ± 0.05	1.10 ± 0.05	1.48 ± 0.05	1.49 ± 0.05	1.55 ± 0.05	1.60 ± 0.05	0.160 ± 0.010
Operating temperature (°C)	- 60°C; +125°C	- 40°C; +105°C	- 40°C; +140°C	- 40°C; +140°C	- 40°C; +140°C	- 40°C; +140°C	- 40°C; +140°C	- 40°C; +140°C	- 40°C; +140°C	- 40°C; +140°C	- 40°C; +150°C	- 40°C; +150°C	----
Thermal conductivity W/(m.K)	----	0,35	0,3	----	0,32	0,32	----	----	0,35	0,34	0,8	0,8	----
Water absorption (%) 24 hours - 23°C	0,15	0,4	0,5	----	0,8	0,8	----	----	0,25	0,20	< 0,1	< 0,1	----
Dielectric strength (KV/mm)	> 30	----	----	> 30	> 20	> 20	----	> 30	> 20	> 30	> 25	> 25	----
Dielectric constant (at 55 KHz)	2.8	5.4	5.5	3.8	5,1	5,1	----	3.2	4.1	4.2	4.3	4	----
Lost factor tan δ (K55 Hz)	0,03	0,075	0.085	0.02	0,08	0,08	----	0.02	0.02	0.02	0.016	0.009	----
Application	Encapsulation	Encapsulation	EMV Filters	Encapsulation	Encapsulation	Encapsulation	Seal	Encapsulation	Encapsulation	Encapsulation	Soldering	Gas meters Encapsulation	Cast in situ with 0.250