

# Polyurethane - Cross Reference Chart



**Liquid Properties:**

**Base Material**  
**Density Part A - Resin (g/ml)**  
**Density Part B - Hardener (g/ml)**  
**Part A Viscosity (mPa @ 23°C)**  
**Part B Viscosity (mPa @ 23°C)**  
**Mix Ratio (Weight)**  
**Mix Ratio (Volume)**  
**Usable Life (20°C)**  
**Gel Time (23°C)**  
**Cure Time (23 °C)**  
**Cure Time (60 °C)**  
**Colour Part A - Resin**  
**Colour Part B - Hardener**

**Storage Conditions**

**Shelf Life**

**Standard Pack Size**

**Exotherm (Measured on 100ml sample in a cylinder of diameter 49.4mm @ 23°C)**

**Shrinkage**

	UR5597	UR5041	UR5048	UR5528	UR5562	UR5598	UR5044	UR5097	UR5547	UR5604	UR5608
Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Density Part A - Resin (g/ml)	1.46	1.17	0.93	1.02	1.01	1.00	1.51	1.53	1.69	1.62	1.65
Density Part B - Hardener (g/ml)	1.24	1.24	1.24	1.24	1.06	1.21	1.34	1.24	1.23	1.21	1.24
Part A Viscosity (mPa @ 23°C)	8000	9300	1200	3500	1700	1700	10000	30000	24000	20000	20000
Part B Viscosity (mPa @ 23°C)	50	55	60	150	50	20	370	50	230	50	50
Mix Ratio (Weight)	6.47:1	3.64:1	14.05:1	2.37:1	2.24:1	2.51:1	13.44:1	7.52:1	5.52:1	5.21:1	5.18:1
Mix Ratio (Volume)	5.48:1	3.85:1	18.58:1	2.87:1	2.34:1	3.03:1	11.96:1	6.07:1	4.01:1	3.88:1	6.93:1
Usable Life (20°C)	20 mins	20 mins	20 mins	20 mins	17 mins	20 mins	25 mins	20 mins	20 mins	40 mins	30 mins
Gel Time (23°C)	45 mins	60 mins	40 mins	35 mins	22 mins	40 mins	40 mins	80 mins	50 mins	90 mins	60 mins
Cure Time (23 °C)	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours
Cure Time (60 °C)	4 hours	4 hours	4 hours	5 hours	4 hours	4 hours	3 hours	4 hours	3 hours	3 hours	3 hours
Colour Part A - Resin	Grey	Black	Clear	Black	Clear	Amber	Off White	Black	Black	Black	Black
Colour Part B - Hardener	Brown	Amber	Amber	Amber	Clear	Amber	Dark Blue	Amber	Brown	Brown	Brown
Storage Conditions	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C	Dry Conditions Above 15°C Below 35°C
Shelf Life	12	12	12	12	12	12	12	12	12	12	12
Standard Pack Size											
Exotherm (Measured on 100ml sample in a cylinder of diameter 49.4mm @ 23°C)	<45°C	<50°C	<35°C	<35°C	<90°C	<40°C	<35°C	<40°C	<35°C	<35°C	<35°C
Shrinkage	<1%	<0.5%	<1%	<1%	<1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%

**Cured System:**

**Thermal Conductivity (W/mK)**  
**Cured Density (g/ml)**  
**Mixed System Viscosity (mPa @ 23°C)**  
**Temperature Range (°C)**  
**Max Temperature Range (Short Term °C / Mins)**  
**Dielectric Strength (kV/mm)**  
**Volume Resistivity (ohm-cm)**  
**Shore Hardness**  
**Colour (Mixed System)**  
**Flame Retardency**  
**Loss Tangent @ 50 Hz**  
**Permittivity @ 50 Hz**  
**Comparative Tracking Index**

**Water Absorption (10 days @ 20°C / 1 hour @ 100°C)**

**Elongation At Break**

Thermal Conductivity (W/mK)	0.35	0.25	0.20	0.245	0.20	0.25	0.25	0.65	0.35	0.45	0.45
Cured Density (g/ml)	1.42	1.18	0.95	1.07	1.02	1.06	1.49	1.49	1.60	1.54	1.59
Mixed System Viscosity (mPa @ 23°C)	3000	2500	980	2000	300	1000	3400	6000	4000	2000	2000
Temperature Range (°C)	-40 to +110	-60 to +125	-60 to +100	-50 to +125	-40 to +120	-50 to +120	-60 to +120	-40 to +110	-50 to +120	-40 to +130	-40 to +100
Max Temperature Range (Short Term °C / Mins)	+120	+130	+100	+130	+130	+130	+130	+130	+125	+155	+110
Dielectric Strength (kV/mm)	12	20	18	25	11	10	17.7	18	14	18	18
Volume Resistivity (ohm-cm)	10 <sup>12</sup>	10 <sup>15</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>13</sup>	10 <sup>10</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>
Shore Hardness	A75	A85	A12	D57	A95	A60	A40	A85	A85	A75	D50
Colour (Mixed System)	Grey	Black	Clear	Black	Water White	Clear Amber	Dark Blue	Black	Black	Black	Black
Flame Retardency	Yes	No	No	No	No	No	Yes	Yes	No	Yes	Yes
Loss Tangent @ 50 Hz	0.04	0.015	0.02	0.027	0.025	0.02	0.04	0.015	0.14	0.015	0.015
Permittivity @ 50 Hz	4.00	3.10	3.50	3.50	3.50	3.90	4.93	3.60	5.00	4.90	3.90
Comparative Tracking Index	-	-	-	-	-	-	>600 Volts	>600 Volts	-	>600 Volts	>600 Volts
Water Absorption (10 days @ 20°C / 1 hour @ 100°C)	<0.5% / <1%	<0.5% / <1%	<0.5% / <1%	Extra Data	<1% / <2%	<0.5% / <1%	<0.5% / <1%	<0.2% / <0.5%	<0.5% / <1%	<0.5% / <1%	<0.5% / <1%
Elongation At Break	-	200%	-	104%	-	-	-	-	-	-	-

**Approvals:**

**RoHS Compliant**

**UL Approval**

RoHS Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL Approval	Meets UL94 V-2	No	No	No	No	No	UL94 V-0	UL94 V-0	No	UL94 V-0	UL94 V-0