

NEUTHANE 200 Series

TDI – Ester Prepolymers & TDI - Caprolactone Ester Prepolymers

Published June 2024 Version 11

TDI - Ester Prepolymers

The NEUTHANE 200 series are high performance TDI – ester prepolymers designed to produce items for use in arduous application areas.

- a high level of physical properties
- good cut and abrasion resistance
- good chemical resistance
- hardness range from 70 - 95A

Typical

Applications

Medium load roller coverings (e.g. steel industry – dry application areas)
 Roller coverings where lubricants are present (e.g. aluminium manufacture)
 Wheels (e.g. pallet truck)
 Mining and quarrying (e.g. screen decks, scraper blades)
 Oil and gas industry (e.g. gaskets, pipe pigs)
 Press blocks
 Paper converting (e.g. anvil rollers)

Processing can be carried out by hand or by dispensing machine

- Avoid prolonged storage of prepolymers at elevated temperatures. This will result in low hardness and lower properties of the cured material
- Avoid moisture contamination of all materials
- Part used containers should be flushed with dry nitrogen and resealed immediately after use

Hand Processing

1. Melt prepolymer at 50-70°C for 12-24 hours (as a guide the grades with the lower NCO value will take longer to melt than those with higher NCO values)
2. Heat the prepolymer and curative to the recommended temperature
3. Add pigments and Antifoam, as applicable, whilst mixing
4. It is recommended that air be removed from the prepolymer under vacuum prior to addition of the curative
5. Add the curative and thoroughly mix ensuring that no unmixed material is left on the container sides (if necessary the mix can be transferred to a second clean container and mixed again)
6. Remove air under vacuum
7. Cast into moulds, preheated to the recommended temperature
8. Cure as recommended

Alternatives

Dynamic Resilience	- PTMEG ether-based systems should be considered	NEUTHANE 100 [TDI], 600 [MDI], NEUTHANE 801 [Quasi]
Humid/Wet	- PTMEG ether-based systems should be considered	NEUTHANE 100 [TDI], 600 [MDI], NEUTHANE 500 [Aliphatic]
Resilience	-MDI based system	NEUTHANE 600HR series

NEUTHANE 200 Series TDI - Ester Prepolymers (70- 95 Shore A)

NEUTHANE GRADE		223	223	225	225	235S	235S	235	235
%NCO (mid-point)	%	2.3	2.3	2.5	2.5	3.5	3.5	3.5	3.5
Curative		MOCA	CA6	MOCA	CA6	MOCA	CA6	MOCA	CA6
Recommended Stoichiometry	%	95	95	95	95	95	95	95	95
Mix Ratio Curative per 100 Parts Resin	by weight	7.0	5.6	7.5	6.0	10.6	8.5	10.6	8.5
Resin Temperature	°C	80	80	80	80	80	80	80	80
Curative Temperature	°C	110	20-25	110	20-25	110	20-25	110	20-25
Recommended Mould Temperature	°C	90	90	90	90	90	90	90	90
Resin Viscosity (100°C / Process Temperature)	cPs	850 / 2250	850 / 2250	1030 / 1200	1030 / 1200	860 / 1310	1050 / n.a	950 / 1313	950 / 1313
Pot life (on a 500g mix)	minutes	10 - 20	10 - 20	17	17	15	13	7.5	5
Recommended Cure Temperature / Time	°C / hrs	90 - 100 / 16	90 - 100 / 16	95 / 16	95 / 16	95 / 16	90 - 100 / 16	95 / 16	95 / 16

Hardness	ISO 48-4	Shore A	70	70	76	73	85	83	86	87
	ISO 48-4	Shore D	-	-	-	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	380 (2.62)	381 (2.6)	480 (3.3)	439 (3.0)	760 (5.2)	800 (5.5)	840 (5.8)	814 (5.6)
300% Modulus	ISO 37	lb/in ² (MPa)	500 (3.45)	590 (4.1)	770 (5.3)	711 (4.9)	1310 (9.1)	970 (6.7)	1420 (9.8)	1250 (8.6)
Tensile Strength	ISO 37	lb/in ² (MPa)	4500 (31.1)	2161 (14.9)	5400 (37.3)	2810 (19.4)	7400 (51.0)	5800 (40.0)	7360 (50.7)	6220 (42.9)
Elongation at Break	ISO 37	%	800	965	750	787	570	700	630	622
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	280 (49.0)	353 (63.0)	340 (59.5)	345 (60.3)	475 (83.5)	460 (80.5)	495 (86.8)	509 (89.0)
Compression Set	ISO 815-1	%	33.8	43.8	27.0	42.6	37	36	35.0	33.2
Abrasion loss	ISO 4649	mm ³	75	21	43	15	42	14	40	30
Resilience	ASTM D 2632-92	%	42	51	40	51	30	38	36	36
Specific Gravity		g / cm ³	1.23	1.15	1.23	1.17	1.24	1.24	1.24	1.17

Data above represents typical physical properties. Since conditions of use are beyond our control, no warranty is given or implied in respect of any recommendations or suggestions made by ourselves, nor is freedom from patent infringement inferred.



NEUTHANE 200 Series TDI - Ester Prepolymers (70- 95 Shore A)

NEUTHANE GRADE		235TS	235DS	235DS	239	242S	242S
%NCO (mid-point)	%	3.5	3.5	3.5	3.9	4.2	4.2
Curative		MOCA	MOCA	CA6	MOCA	MOCA	CA6
Recommended Stoichiometry	%	95	95	95	95	95	95
Mix Ratio Curative per 100 Parts Resin	by weight	10.6	10.6	8.5	11.8	12.7	10.2
Resin Temperature	°C	80	80	80	80	80	80
Curative Temperature	°C	110	110	20-25	105	105	20-25
Recommended Mould Temperature	°C	90	90	90	95	95	95
Resin Viscosity (100°C / Process Temperature)	cPs	950 / n.a	800 /1985	800 / 1985	560 / 1200	700 / 1800	700 / 1800
Pot life (on a 500g mix)	minutes	9	7.5	5	6.5	8	3.5
Recommended Cure Temperature / Time	°C / hrs	90 / 16	90 / 16	90 / 16	90/16	95 / 16	95 / 16

Hardness	ISO 48-4	Shore A	86	86	84	90	92	93
	ISO 48-4	Shore D	-	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	500 (3.45)	718 (4.95)	838 (5.76)	-	1330 (9.20)	1420 (9.79)
300% Modulus	ISO 37	lb/in ² (MPa)	1100 (7.59)	1420 (9.79)	1470 (10.14)	1400 (9.7)	2600 (18.00)	2360 (16.28)
Tensile Strength	ISO 37	lb/in ² (MPa)	5700 (39.33)	8360 (57.64)	8090 (55.78)	6500 (44.8)	8700 (60.0)	8250 (56.90)
Elongation at Break	ISO 37	%	550	510	670	600	500	538
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	410 (71.80)	225 (39.30)	279 (48.70)	450 (79.0)	610 (107.50)	700 (122.00)
Compression Set	ISO 815-1	%	27	-	29	-	32	33.5
Abrasion loss	ISO 4649	mm ³	-	-	39	-	42	19
Resilience	ASTM D 2632-92	%	40	-	15	-	25	25
Specific Gravity		g / cm ³	1.24	-	1.22	-	1.27	1.21

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NEUTHANE 200 Series TDI - Ester Prepolymers (70- 95 Shore A)

NEUTHANE GRADE		242	242	254	254
%NCO (mid-point)	%	4.2	4.2	5.4	5.4
Curative		MOCA	CA6	MOCA	CA6
Recommended Stoichiometry	%	95	95	95	95
Mix Ratio Curative per 100 Parts Resin	by weight	12.7	10.2	16.3	13.1
Resin Temperature	°C	80	80	80	80
Curative Temperature	°C	105	20-25	110	20-25
Recommended Mould Temperature	°C	95	95	95	90
Resin Viscosity (100°C / Process Temperature)	cPs	830 / 1450	830 / 1450	800 / 1000	800 / 1000
Pot life (on a 500g mix)	minutes	5	3	4.5	5
Recommended Cure Temperature / Time	°C / hrs	95 / 16	95 / 16	95 / 16	90 - 100 / 16

Hardness	ISO 48-4	Shore A	93	94	95	93
	ISO 48-4	Shore D	-	-	45	-
100% Modulus	ISO 37	lb/in ² (MPa)	1400 (6.7)	1250 (8.6)	2020 (13.9)	1680 (11.6)
300% Modulus	ISO 37	lb/in ² (MPa)	2670 (18.4)	2050 (14.1)	4210 (29)	3300 (22.8)
Tensile Strength	ISO 37	lb/in ² (MPa)	8110 (56.0)	8545 (58.9)	9030 (62.2)	6000 (41.4)
Elongation at Break	ISO 37	%	520	680	460	500
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	660 (115.7)	975 (170.5)	715 (125.2)	550 (96.3)
Compression Set	ISO 815-1	%	28	34.2	29	41.5
Abrasion loss	ISO 4649	mm ³	40	52	38	22
Resilience	ASTM D 2632-92	%	27	24	30	30
Specific Gravity		g / cm ³	1.27	1.20	1.28	1.28

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NEUTHANE 200 Series

TDI – Ester Prepolymers with NEUTHANE CA2

The NEUTHANE 200 series cured with NEUTHANE CA2 improves dynamics and load carrying properties.

- a high level of physical properties
- higher load bearing
- extend operating temp range vs MBOCA or NEUTHANE CA6. -Customer to confirm suitability in applications

Typical Applications

Medium load roller coverings (e.g. steel industry – dry application areas)
 Roller coverings where lubricants are present (e.g. aluminium manufacture)
 Wheels (e.g. pallet truck)
 Mining and quarrying (e.g. screen decks, scraper blades)
 Oil and gas industry (e.g. gaskets, pipe pigs)
 Press blocks
 Paper converting (e.g. anvil rollers)

Processing can be carried out by hand or by dispensing machine

- Avoid prolonged storage of prepolymers at elevated temperatures. This will result in low hardness and lower properties of the cured material
- Avoid moisture contamination of all materials
- Part used containers should be flushed with dry nitrogen and resealed immediately after use

Hand Processing

1. Melt prepolymer at 60-70°C for 16-24 hours
2. Heat the prepolymer and curative to the recommended temperature
3. Remove moisture from plasticiser or FP3 (after blending) under vacuum at 110-120°C
4. Add pigments and Antifoam, as applicable, whilst mixing
5. Add the curative and thoroughly mix ensuring that no unmixed material is left on the container sides (if necessary the mix can be transferred to a second clean container and mixed again)
6. If using more than one mix, blend to ensure homogeneity and mix again.
7. Remove air under vacuum
8. Cast into moulds, preheated to the recommended temperature
9. Cure as recommended.

Alternatives

Abrasion/cut resistance	- Ester based systems	NEUTHANE 802 [MDI]
Humid/Wet	- PTMEG ether-based systems should be considered	NEUTHANE 100 [TDI], 600 [MDI], NEUTHANE 500 [Aliphatic]

NEUTHANE 200 Series TDI - Ester Prepolymers (cured with NEUTHANE CA2)

NEUTHANE GRADE		223	225	231	232	244	255
%NCO (mid-point)	%	2.3	2.5	3.1	3.2	4.4	5.5
Curative		CA2	CA2	CA2	CA2	CA2	CA2
Recommended Stoichiometry	%	95	95	95	95	95	95
Mix Ratio Curative per 100 Parts Resin	by weight	9.9	10.7	13.3	13.7	18.9	23.6
Resin Temperature	°C	80	80	80	80	80	80
Curative Temperature	°C	110	110	110	110	110	110
Recommended Mould Temperature	°C	90	90	90	90	90	90
Resin Viscosity (100°C / Process Temperature)	cPs	850 / 2250	1030 / 1200	700 / n.a	710 / 1240	500 / n.a	500 / 1238
Pot life (on a 500g mix)	minutes	1-2	1-2	1-2	1-2	1-2	1-2
Recommended Cure Temperature / Time	°C / hrs	90 - 100 / 16	95 / 16	95 / 16	95 / 16	90 - 100 / 16	95 / 16

Hardness	ISO 48-4	Shore A	85	86	91	90	96	97
	ISO 48-4	Shore D	-	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	715 (4.93)	809 (5.58)	1112 (7.67)	1070 (7.38)	2050 (14.14)	2470 (17.03)
300% Modulus	ISO 37	lb/in ² (MPa)	960 (6.62)	1067 (7.36)	1401 (9.66)	1690 (11.66)	4350 (30.00)	5950 (41.03)
Tensile Strength	ISO 37	lb/in ² (MPa)	4887 (33.70)	5728 (39.50)	6888 (47.50)	8430 (58.14)	7640 (52.69)	7350 (50.70)
Elongation at Break	ISO 37	%	782	761	707	543	409	350
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	464 (81.2)	490 (85.7)	618 (108.0)	638 (112.0)	724 (127.0)	668 (117.0)
Compression Set	ISO 815-1	%	-	29.5	-	-	-	-
Abrasion loss	ISO 4649	mm ³	-	57	-	-	-	-
Resilience	ASTM D 2632-92	%	-	48	-	-	-	-
Specific Gravity		g / cm ³	-	1.15	-	-	-	-

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NEUTHANE 200 Series

TDI – Ester Prepolymers with TMP & Plasticiser

The NEUTHANE 200 series cured with TMP and plasticised produces low hardness polyurethanes with (in the case of NEUTHANE 234 and 242) exceptional solvent swell resistance.

- long pot life
- excellent solvent swell resistance
- good cut resistance
- hardness ranges from <40 - 60A
- the option to be combined with fillers to reduce cost and improve grinding characteristics (NEUTHANE FP3)

Typical Applications

Lacquer and paint applicator rollers and wheels (NEUTHANE 235, 234 & 242)
 Isostatic bage (NEUTHANE 235)
 Printing rollers

Processing can be carried out by hand or by dispensing machine

- Avoid prolonged storage of prepolymers at elevated temperatures. This will result in low hardness and lower properties of the cured material
- Avoid moisture contamination of all materials
- Part used containers should be flushed with dry nitrogen and resealed immediately after use

Hand Processing

10. Melt prepolymer at 60-70°C for 16-24 hours
11. Heat the prepolymer and curative to the recommended temperature
12. Remove moisture from plasticiser or FP3 (after blending) under vacuum at 110-120°C
13. Add pigments and Antifoam, as applicable, whilst mixing
14. Add the curative and thoroughly mix ensuring that no unmixed material is left on the container sides (if necessary the mix can be transferred to a second clean container and mixed again)
15. If using more than one mix, blend to ensure homogeneity and mix again.
16. Remove air under vacuum
17. Cast into moulds, preheated to the recommended temperature
18. Cure as recommended.

Alternatives

Abrasion/cut resistance	- Ester based systems	NEUTHANE 802 [MDI]
Humid/Wet	- PTMEG ether-based systems should be considered	NEUTHANE 100 [TDI], 600 [MDI], NEUTHANE 500 [Aliphatic]

NEUTHANE 200 Series – TDI - Ester Prepolymers (cured with NEUTHANE TMP/TIPA & Plasticiser)

NEUTHANE GRADE		234	234	239	243MS	250LS **	270
%NCO (mid-point)	%	3.4	3.4	3.9	4.3	5.0	7.0
Curative		TMP	TMP	TMP	TMP	TMP	TMP
Mix Ratio Curative per 100 Parts Resin	by weight	3.5	3.5	4.0	4.4	5.1	7.1
NEUTHANE Plasticiser per 100 Parts Resin	by weight	0	15	0	0	0	20
Resin Temperature	°C	80	80	80	80	80	80
Curative Temperature	°C	70	70	70	70	70	70
Plasticizer Temperature	°C	-	90	-	-	-	90
Recommended Mould Temperature	°C	110	110	110	110	110	110
Resin Viscosity (100°C / Process Temperature)	cPs	400 /1200	400 /1200	560 / 1200	425 / n.a	940 / n.a	300
Pot life (on a 500g mix)	minutes	90+	90+	90+	90+	90+	90+
Recommended Cure Temperature / Time	°C / hrs	110 / 22	110 / 22	110 / 24	110 / 22	110 / 22	110 / 24

Hardness	ISO 48-4	Shore A	53	35	52	58	75	60
	ISO 48-4	Shore D	-	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	148 (1.02)	-	197 (1.36)	208 (1.43)	535 (3.69)	273 (1.88)
300% Modulus	ISO 37	lb/in ² (MPa)	354 (2.44)	-	513 (3.54)	522 (3.60)	2470 (17.03)	-
Tensile Strength	ISO 37	lb/in ² (MPa)	1590 (10.96)	-	1940 (13.38)	2830 (19.51)	6890 (47.50)	-
Elongation at Break	ISO 37	%	493	-	459	456	372	159
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	87 (15.23)	-	113 (19.76)	96 (16.81)	204 (35.72)	79.7 (13.95)
Specific Gravity		g / cm ³	1.21	1.29	1.26	1.20	1.26	1.17

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NEUTHANE 200 Series – TDI - Ester Prepolymers (cured with NEUTHANE TMP/TIPA & Plasticiser)

NEUTHANE GRADE		242	242	242	242	242	242	242
%NCO (mid-point)	%	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Curative		TMP	TMP	TMP	TMP	TMP	TMP	TMP
Mix Ratio Curative per 100 Parts Resin	by weight	4.4	4.4	4.4	4.4	4.4	4.4	4.4
NEUTHANE Plast002 per 100 Parts Resin	by weight	10	15	20	25	30	35	40
Resin Temperature	°C	90	90	80	80	80	80	80
Curative Temperature	°C	110	110	110	110	110	110	110
Plasticizer Temperature	°C	90	90	90	90	90	90	90
Recommended Mould Temperature	°C	110	110	110	110	110	110	110
Resin Viscosity (100°C / Process Temperature)	cPs	830 / 1100	830 / 1100	830 / 1100	830 / 1100	830 / 1100	830 / 1100	830 / 1100
Pot life (on a 500g mix)	minutes	90+	90+	90+	90+	90+	90+	90+
Recommended Cure Temperature / Time	°C / hrs	110 / 22	110/24	110 / 24	110 / 22	110 / 22	110 / 24	110 / 24

Hardness	ISO 48-4	Shore A	55	50	47	41	35	32	27
	ISO 48-4	Shore D	-	-	-	-	-	-	-
Specific Gravity		g / cm ³	1.20	1.20	1.20	1.20	1.20	1.20	1.20

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NEUTHANE 200 Series – TDI - Ester Prepolymers (cured with NEUTHANE TMP/TIPA & Plasticiser)

NEUTHANE GRADE		235S	235S	242	242	242S	242S	254
%NCO (mid-point)	%	3.5	3.5	4.2	4.2	4.2	4.2	5.4
Curative		TMP / TIPA	TMP / TIPA	TMP / TIPA	TMP / TIPA	TMP / TIPA	TMP / TIPA	TMP / TIPA
Mix Ratio Curative per 100 Parts Resin	by weight	4.1	4.1	4.9	4.9	4.9	4.9	6.3
NEUTHANE Plasticiser per 100 Parts Resin	by weight	0	20	0	20	0	20	0
Resin Temperature	°C	80	80	90	80	80	80	80
Curative Temperature	°C	70	70	70	70	70	70	70
Plasticizer Temperature	°C	-	85	-	90	-	90	-
Recommended Mould Temperature	°C	110	110	110	110	110	110	110
Resin Viscosity (100°C / Process Temperature)	cPs	860 / 1413	860 / 1413	830 / 1100	830 / 1100	700 / 1075	700 / 1075	450 / 1000
Pot life (on a 500g mix)	minutes	90+	90+	90+	90+	90+	90+	90+
Recommended Cure Temperature / Time	°C / hrs	110 / 22	110 / 24	110/24	110 / 24	110 / 20	110 / 22	110 / 24

Hardness	ISO 48-4	Shore A	50	40	60	53	62	55	65
	ISO 48-4	Shore D	-	-	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	184 (1.26)	141 (0.97)	275 (1.9)	203 (1.40)	359 (2.47)	248 (1.71)	402 (2.77)
300% Modulus	ISO 37	lb/in ² (MPa)	333 (2.29)	251 (1.73)	608 (4.2)	450 (3.10)	1078 (7.43)	631 (4.35)	3000 (20.68)
Tensile Strength	ISO 37	lb/in ² (MPa)	2484 (17.12)	2055 (14.16)	5166 (35.6)	2331 (16.07)	5541 (38.20)	2257 (15.56)	4298 (29.63)
Elongation at Break	ISO 37	%	567	673	480	491	371	408	311
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	153 (26.79)	125 (21.89)	175 (31.0)	143 (25.04)	219 (38.35)	178 (31.17)	175 (30.64)
Specific Gravity		g / cm ³	1.19	1.18	1.20	1.19	1.20	1.19	1.19

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NEUTHANE 200 Series

TDI – Caprolactone Ester Prepolymers

The NEUTHANE 200 Caprolactone series are high performance TDI – ester prepolymers designed to produce items for use in arduous application areas. They offer advantages over conventional ester TDI prepolymers in several key areas.

- a high level of physical properties
- good cut and abrasion resistance
- good chemical resistance
- good low temperature flexibility
- low viscosity and long pot life¹
- improved hydrolysis resistance¹
- improved dynamic performance¹
- hardness range from 60 – 95 Shore A

¹ Compared with conventional TDI ester prepolymers

Typical

Applications

Medium load roller coverings (e.g. steel industry)
 Roller coverings where lubricants are present (e.g. Dioctyl Sebacate)
 Mining and quarrying (e.g. screen decks, scraper blades)
 Oil and gas industry (e.g. gaskets)
 Metal Finishing (e.g. vibration bowls)

Processing can be carried out by hand or by dispensing machine

- Avoid prolonged storage of prepolymers at elevated temperatures. This will result in low hardness and lower properties of the cured material
- It is important when processing NEUTHANE 230 that the correct temperatures are maintained. Failure to do so may result in incorrect cured hardness
- Avoid moisture contamination of all materials
- Part used containers should be flushed with dry nitrogen and resealed immediately after use

Hand Processing

1. Melt prepolymer at 50-70°C for 12-24 hours (as a guide the grades with the lower NCO value will take longer to melt than those with higher NCO values).
2. Heat the prepolymer and curative to the recommended temperature
3. Add pigments and Antifoam, as applicable, whilst mixing
4. It is recommended that air be removed from the prepolymer under vacuum prior to addition of the curative
5. Add the curative and thoroughly mix ensuring that no unmixed material is left on the container sides (if necessary the mix can be transferred to a second clean container and mixed again)
6. Remove air under vacuum
7. Cast into moulds, preheated to the recommended temperature
8. Cure as recommended

Alternatives

Abrasion/cut resistance	- Ester based systems	NEUTHANE 802 [MDI]
Humid/Wet	- PTMEG ether-based systems should be considered	NEUTHANE 100 [TDI], 600 [MDI], NEUTHANE 500 [Aliphatic]

NEUTHANE 200 Series –TDI – Caprolactone Ester Prepolymers (60 - 95 Shore A)

NEUTHANE GRADE		230	230	232	232	244	244	255	255
%NCO (mid-point)	%	3.2	3.2	3.2	3.2	4.4	4.4	5.5	5.5
Curative		MOCA	CA6	MOCA	CA6	MOCA	CA6	MOCA	CA6
Recommended Stoichiometry	%	95	95	95	95	95	95	95	95
Mix Ratio Curative per 100 Parts Resin	by weight	9.7	7.7	95	95	13.3	10.7	16.6	13.3
Resin Temperature	°C	80	80	80	80	80	80	80	80
Curative Temperature	°C	105	20-25	110	20-25	110	20-25	110	20-25
Recommended Mould Temperature	°C	90	90	90	90	90	90	90	90
Resin Viscosity (100°C / Process Temperature)	cPs	650 / 1125	650 / 1125	710 / 1240	710 / 1240	500 / n.a	500 / n.a	500 / 1238	500 / 1238
Pot life (on a 500g mix)	minutes	18	13	14	6	9	9	9	6.5
Recommended Cure Temperature / Time	°C / hrs	90 / 20	90 / 20	95 / 16	95 / 16	90 / 18	90 / 18	90 / 18	90 / 18

Hardness	ISO 48-4	Shore A	59	78	80	80	90	90	95	91
	ISO 48-4	Shore D	-	-	-	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	255 (1.76)	715 (4.93)	560 (3.9)	713 (4.9)	1200 (8.3)	1400 (9.7)	1600 (11.0)	1570 (10.82)
300% Modulus	ISO 37	lb/in ² (MPa)	400 (2.76)	1260 (8.68)	1130 (7.8)	1310 (9.0)	2500 (17.2)	3080 (21.2)	3000 (20.7)	3280 (22.61)
Tensile Strength	ISO 37	lb/in ² (MPa)	2920 (20.13)	5685 (39.2)	5970 (41.2)	6580 (45.4)	6700 (46.2)	6230 (43.0)	7000 (48.2)	8700 (59.98)
Elongation at Break	ISO 37	%	475	517	400	521	350	401	300	489
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	172 (30.12)	392 (68.65)	350 (61.4)	432 (75.8)	490 (85.7)	585 (102.3)	550 (96.2)	617 (108.05)
Compression Set	ISO 815-1	%	17	35	39.0	26.0	40	n.a	45	47.7
Abrasion loss	ISO 4649	mm ³	38.3	54.8	49	48	49	n.a	49	58
Resilience	ASTM D 2632-92	%	24	50	42	51	35	37	33	25
Specific Gravity		g / cm ³	1.12	1.11	1.14	1.10	1.14	n.a	1.14	1.14

Data above represents typical physical properties. Since conditions of use are beyond our control, no warranty is given or implied in respect of any recommendations or suggestions made by ourselves, nor is freedom from patent infringement inferred.

