



Technical Data Sheet: NEUTHANE 802NG C53 Series

MDI - Ester Quasi Systems (2 Component Catalysed System)

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NEUTHANE 802-NG C53 Series (Catalysed 2 Component) MDI - Ester Quasi Systems (55A - 95 Shore A)

Properties			Processing			Special Considerations		
<p>The NEUTHANE 802NG C53 series are high performance MDI - ester quasi systems designed to produce items for use in arduous application areas.</p> <p>They offer:</p> <ul style="list-style-type: none"> a high level of physical properties good cut and abrasion resistance good chemical resistance higher levels of physical properties at low end of the hardness range compared to TDI systems low process temperatures <p>Typical Applications</p> <ul style="list-style-type: none"> Wheels (e.g. pallet truck) Mining and quarrying (e.g. screen decks, scraper blades) Oil and gas industry (e.g. gaskets, pipe pigs) Automotive (e.g. suspension bushes) Concrete Industry (e.g. moulds for decorative slabs and walls) 			<p>Processing can be carried out by hand or by dispensing machine.</p> <p>Hand Processing</p> <ul style="list-style-type: none"> Melt ISO component at 45°C- 55°C , POLYOL components at 55°C - 60°C for 12-24 hours Ensure components are completely liquid and thoroughly mixed prior to use Bring all components to the recommended process temperature. Add pigments and Antifoam (as applicable) to the polyol component whilst mixing It is recommended that air be removed from the ISO component under vacuum prior to addition of the curative Add all components 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) Remove air under vacuum Cast into moulds, preheated to the recommended temperature Cure as recommended 			<p>Processing</p> <ul style="list-style-type: none"> Avoid moisture contamination of all materials. Part used containers should be flushed with dry nitrogen and resealed immediately after use It is vital to ensure that both components are completely liquid and thoroughly mixed prior to use Due to the exothermic nature of the system, larger mixes will have a shorter pot life <p>Alternatives</p> <ul style="list-style-type: none"> Humid/Wet - PTMEG ether based systems should be considered: NEUTHANE 100 [TDI], NEUTHANE 600 [MDI] or NEUTHANE 500 [Aliphatic] Dynamic/Resilience - PTMEG ether based materials should be considered: NEUTHANE 100 [TDI], NEUTHANE 600 [MDI] or NEUTHANE 801 [MDI Quasi] Temperature – NEUTHANE 100 [TDI PTMEG] or NEUTHANE 500 [Aliphatic Isocyanate] systems may be considered 		
COST	PROCESSING	ABRASION	DYNAMIC	RESILIENCE	SOLVENT	HUMID/WET	TEMPERATURE	UV STABILITY

Key

Excellent / Good

Good / Average

Average / Poor

NEUTHANE 802-NG C53 Series (Catalysed 2 Component) MDI - Ester Quasi Systems (55A - 95 Shore A)

NEUTHANE Curative		802/55 NG C53	802/60 NG C53	802/65 NG C53	802/70 NG C53	802/75 NG C53
Mix Ratio N802 ISO-NG	by weight	100	100	100	100	100
Mix Ratio Curative per 100 parts 802 ISO-NG	by weight	278.1	199.3	172.4	154.0	132.4
NEUTHANE 802 ISO-NG Operating Temperature (OT)	°C	45	45	45	45	45
NEUTHANE 802 POLY-NG C53 Operating Temperature (OT)	°C	55	55	55	55	55
NEUTHANE 802 ISO-NG Viscosity / SG (at OT)	cPs / g/cm ³	751 / 1.183	751 / 1.183	751 / 1.183	751 / 1.183	751 / 1.183
NEUTHANE 802 POLY-NG C53 Viscosity / SG (at OT)	cPs / g/cm ³	1750 / 1.146	1814 / 1.144	1814 / 1.144	1814 / 1.144	1814 / 1.144
Optimum Mould Temperature	°C	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Pot life	minutes	3-6	3-6	3-6	3-6	3-6
Recommended Cure Temperature / Time	°C / hrs	70 / 16	70 / 16	70 / 16	70 / 16	70 / 16

Hardness	DIN 2240-91	Shore A	55	60	65	70	75
	DIN 2240-91	Shore D	-	-	-	-	-
100% Modulus	BS 903 Pt A2 - ISO 37	lb/in ² (Mpa)	188 (1.3)	275 (1.9)	377 (2.6)	449 (3.1)	507 (3.5)
300% Modulus	BS 903 Pt A2 - ISO 37	lb/in ² (Mpa)	275 (1.9)	464 (3.2)	667 (4.6)	841 (5.8)	855 (5.9)
Tensile Strength	BS 903 Pt A2 - ISO 37	lb/in ² (Mpa)	2755 (19)	3480 (24)	3770 (26)	3916 (27)	5221 (36)
Elongation at Break	BS 903 Pt A2 - ISO 37	%	855	680	620	610	600
Tear (Die C)	ISO 34-1	KN/m	28.7	42	53	59	71
Tear (Trouser)	ISO 34-1	N/mm	10	11	18	18	19
Abrasion loss	DIN 53516	mm ³	< 40	< 40	< 40	< 40	< 40
Resilience	ASTM D 2632-92	%	52	50	50	49	45
Specific Gravity		g/cm ³	1.16	1.17	1.17	1.18	1.18

Information contained in the data above is, to the best of our knowledge, true and accurate. 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 802-NG C53 Series (Catalysed 2 Component) MDI - Ester Quasi Systems (55A - 95 Shore A)

NEUTHANE Curative		802/80 NG C53	802/85 NG C53	802/90 NG C53	802/95 NG C53
Mix Ratio N802 ISO-NG	by weight	100	100	100	100
Mix Ratio Curative per 100 parts 802 ISO-NG	by weight	97	88.0	72.4	57.9
NEUTHANE 802 ISO-NG Operating Temperature (OT)	°C	45	45	45	45
NEUTHANE 802 POLY-NG C53 Operating Temperature (OT)	°C	55	55	55	55
NEUTHANE 802 ISO-NG Viscosity / SG (at OT)	cPs / g/cm ³	751 / 1.183	751 / 1.183	751 / 1.183	751 / 1.183
NEUTHANE 802 POLY-NG C53 Viscosity / SG (at OT)	cPs / g/cm ³	1750 / 1.146	1750 / 1.146	1814 / 1.144	1814 / 1.144
Optimum Mould Temperature	°C	85 - 95	85 - 95	85 - 95	85 - 95
Pot life	minutes	3-5	3-5	3-5	3-5
Recommended Cure Temperature / Time	°C / hrs	70 / 16	70 / 16	70 / 16	70 / 16

Hardness	DIN 2240-91	Shore A	80	85	90	95
	DIN 2240-91	Shore D	-	-	-	-
100% Modulus	BS 903 Pt A2 - ISO 37	lb/in ² (Mpa)	710 (4.9)	884 (6.1)	1102 (7.6)	1392 (9.6)
300% Modulus	BS 903 Pt A2 - ISO 37	lb/in ² (Mpa)	1421 (9.8)	1609 (11.1)	2059 (14.2)	2509 (17.3)
Tensile Strength	BS 903 Pt A2 - ISO 37	lb/in ² (Mpa)	6671 (46)	7687 (53)	7687 (53)	8122 (56)
Elongation at Break	BS 903 Pt A2 - ISO 37	%	600	600	590	570
Tear (Die C)	ISO 34-1	KN/m	83	92	100	116
Tear (Trouser)	ISO 34-1	N/mm	24	26	32	43
Abrasion loss	DIN 53516	mm ³	< 40	< 40	< 40	< 40
Resilience	ASTM D 2632-92	%	40	36	36	35
Specific Gravity		g/cm ³	1.18	1.18	1.18	1.18

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