



Technical Data Sheet: NEUTHANE 801XP Series 3 Component Series

MDI - PTMEG Quasi Systems - Extra High Performance

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NEUTHANE 801XP (3 Component - Extra High Performance) MDI - PTMEG Quasi Systems (60A - 75D)

Properties	Processing	Special Considerations
<p>The NEUTHANE 801XP series are high performance MDI - PTMEG ether quasi systems designed to produce items for use in arduous application areas.</p> <p>They offer:</p> <ul style="list-style-type: none"> • a very high level of physical properties • good dynamic performance • good hydrolysis resistance • high resilience • low viscosity • low process temperatures <p>Typical Applications</p> <ul style="list-style-type: none"> • Wheels (e.g. fork truck, pallet truck and press on bands) • In-line roller blade wheels • Mining and quarrying (e.g. screen decks, scraper blades) • Hydrocyclones • Automotive (e.g. suspension bushes) • Roll covering 	<p>Processing can be carried out by hand or by dispensing machine.</p> <p>Hand Processing</p> <ul style="list-style-type: none"> • Long pot life enables hand processing • Melt ISO component at 30-40°C, POLYOL component at 50-60°C and BD at 40°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"> • Pails or Drums must be melted and rolled so material is fully mixed before use • 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>Storage</p> <ul style="list-style-type: none"> • It is recommended to store NEUTHANE 801 ISO XP within the temperature range of 20-30 °C. At lower temperatures can deteriorate, because of the partial crystallisation of its 4,4'-methylenediphenyl diisocyanate content. At higher temperatures above 30 °C, it is not recommended since discolouration and formation of insoluble solids (dimerization) may occur which can lead to a viscosity increase and a decrease of NCO content. • <u>Recovery Procedure</u>: If partial or entire freezing occurs, it is recommended to rapidly melt out NEUTHANE 801 ISO XP at 70°C, typically for 16 hours or overnight.

COST

PROCESSING

ABRASION

DYNAMIC

RESILIENCE

SOLVENT

HUMID/WET

TEMPERATURE

UV STABILITY

Key

Excellent / Good

Good / Average

Average / Poor

NEUTHANE 801XP (3 Component - Extra High Performance) MDI - PTMEG Quasi Systems (60A - 75D)

NEUTHANE		60A	65A	70A	75A
Mix Ratio NEUTHANE 801 ISO-XP	By weight	100	100	100	100
Mix Ratio NEUTHANE 801 POLY- XP	By weight	320.6	307	248.7	213.4
Mix Ratio Butanediol	By weight	8.0	8.7	11.7	13.6
NEUTHANE 801 ISO-XP Operating Temperature (OT)	°C	40	40	40	40
NEUTHANE 801 POLY- XP Operating Temperature (OT)	°C	50	50	50	50
Butanediol Operating Temperature (OT)	°C	40	40	40	40
NEUTHANE 801 ISO-XP Viscosity / SG (at OT)	cPs / g/cm ³	290 / 1.120	290 / 1.120	290 / 1.120	290 / 1.120
NEUTHANE 801 POLY-XP Viscosity / SG (at OT)	cPs / g/cm ³	522 / 0.965	522 / 0.965	522 / 0.965	522 / 0.965
Butanediol Viscosity / SG (at OT)	cPs / g/cm ³	38 / 1.003	38 / 1.003	38 / 1.003	38 / 1.003
Recommended Mould Temperature	°C	80 – 100	80 – 100	80 – 100	80 – 100
Pot life – adjustable with catalyst	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	60A	65A	70A	75A
100% Modulus	BS 903 Pt A2 - ISO 37	Mpa	1.6	2.2	2.9	4
300% Modulus	BS 903 Pt A2 - ISO 37	Mpa	2.7	3.8	5.8	8
Tensile Strength	BS 903 Pt A2 - ISO 37	Mpa	25	26	33	35
Elongation at Break	BS 903 Pt A2 - ISO 37	%	770	730	700	710
Tear (Die C)	ISO 34-1	KN/m	50	55	70	80
Tear Trouser	ISO 34-1	KN/m	19	19	19	26
Abrasion loss	DIN 53516	mm ³	49	35	37	40
Resilience	ASTM D 2632-92	%	62	60	55	51
Specific Gravity		g / cm ³	1.08	1.08	1.08	1.09

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 801XP (3 Component - Extra High Performance) MDI - PTMEG Quasi Systems (60A - 75D)

NEUTHANE		80A	85A	90A	95A
Mix Ratio NEUTHANE 801 ISO-XP	By weight	100	100	100	100
Mix Ratio NEUTHANE 801 POLY- XP	By weight	176.6	146.8	127.9	102.2
Mix Ratio Butanediol	By weight	15.5	17	18	19.3
NEUTHANE 801 ISO-XP Operating Temperature (OT)	°C	40	40	40	40
NEUTHANE 801 POLY- XP Operating Temperature (OT)	°C	50	50	50	50
Butanediol Operating Temperature (OT)	°C	40	40	40	40
NEUTHANE 801 ISO-XP Viscosity / SG (at OT)	cPs / g/cm ³	290 / 1.120	290 / 1.120	290 / 1.120	290 / 1.120
NEUTHANE 801 POLY-XP Viscosity / SG (at OT)	cPs / g/cm ³	522 / 0.965	522 / 0.965	522 / 0.965	522 / 0.965
Butanediol Viscosity / SG (at OT)	cPs / g/cm ³	38 / 1.003	38 / 1.003	38 / 1.003	38 / 1.003
Recommended Mould Temperature	°C	80 – 100	80 – 100	80 – 100	80 – 100
Pot life – adjustable with catalyst	minutes	2 -4	2 -4	2 -4	2 -4
Recommended Cure Temperature / Time	°C / hrs	70 /16	70 /16	70 /16	70 /16

Hardness	DIN 2240-91	Shore A	80A	85A	90A	95A
100% Modulus	BS 903 Pt A2 - ISO 37	Mpa	5.3	6.2	8	10.4
300% Modulus	BS 903 Pt A2 - ISO 37	Mpa	11	12.6	16.6	21
Tensile Strength	BS 903 Pt A2 - ISO 37	Mpa	34	42	42	51
Elongation at Break	BS 903 Pt A2 - ISO 37	%	600	630	560	500
Tear (Die C)	ISO 34-1	KN/m	103	104	104	113
Tear Trouser	ISO 34-1	KN/m	34	39	39	40
Abrasion loss	DIN 53516	mm ³	40	47	58	59
Resilience	ASTM D 2632-92	%	47	46	41	37
Specific Gravity		g / cm ³	1.09	1.10	1.12	1.13

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NEUTHANE 801XP (3 Component - Extra High Performance) MDI - PTMEG Quasi Systems (60A - 75D)

NEUTHANE		50D	55D	60D	65D	70D	75D
Mix Ratio NEUTHANE 801 ISO-XP	By weight	100	100	100	100	100	100
Mix Ratio NEUTHANE 801 POLY- XP	By weight	92.4	89.5	70	60.1	50.3	40.3
Mix Ratio Butanediol	By weight	19.8	20	21	21.5	22	22.5
NEUTHANE 801 ISO-XP Operating Temperature (OT)	°C	40	40	40	40	40	40
NEUTHANE 801 POLY- XP Operating Temperature (OT)	°C	50	50	50	50	50	50
Butanediol Operating Temperature (OT)	°C	40	40	40	40	40	40
NEUTHANE 801 ISO-XP Viscosity / SG (at OT)	cPs / g/cm ³	290 / 1.120	290 / 1.120	290 / 1.120	290 / 1.120	290 / 1.120	290 / 1.120
NEUTHANE 801 POLY-XP Viscosity / SG (at OT)	cPs / g/cm ³	522 / 0.965	522 / 0.965	522 / 0.965	522 / 0.965	522 / 0.965	522 / 0.965
Butanediol Viscosity / SG (at OT)	cPs / g/cm ³	38 / 1.003	38 / 1.003	38 / 1.003	38 / 1.003	38 / 1.003	38 / 1.003
Recommended Mould Temperature	°C	90 – 110	90 – 110	90 – 110	90 – 110	90 – 110	90 – 110
Pot life – adjustable with catalyst	minutes	1 -3	1 -3	1 -3	1 -3	1 -3	1 -3
Recommended Cure Temperature / Time	°C / hrs	70 /16	70 /16	70 /16	70 /16	70 /16	70 /16

Hardness	DIN 2240-91	Shore A	50D	55D	60D	65D	70D	75D
100% Modulus	BS 903 Pt A2 - ISO 37	Mpa	12	14	18	24	27	30
300% Modulus	BS 903 Pt A2 - ISO 37	Mpa	23	25	28	32	36	40
Tensile Strength	BS 903 Pt A2 - ISO 37	Mpa	45	45	45	45	45	45
Elongation at Break	BS 903 Pt A2 - ISO 37	%	480	450	400	390	350	310
Tear (Die C)	ISO 34-1	KN/m	118	125	134	142	150	160
Tear Trouser	ISO 34-1	KN/m	42	50	55	57	60	62
Abrasion loss	DIN 53516	mm ³	58	56	65	75	85	90
Resilience	ASTM D 2632-92	%	37	35	40	45	45	45
Specific Gravity		g / cm ³	1.13	1.14	1.15	1.16	1.17	1.18

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