

NEUTHANE 803XP Series

MDI - PPG Ether Quasi Systems - 3 Component – Improved Performance

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The NEUTHANE 803XP series of MDI - PPG ether quasi systems are designed to offer a good level of physical properties at a price advantage over MDI – PTMEG systems

- good level of physical properties
- good hydrolysis resistance
- ease of use
- low viscosity (liquid at room temperature)
- low process temperatures

Typical

Applications

Dunnage
Non dynamic roller coverings (e.g. conveyor rollers for the steel industry)
Scraper blades (e.g. snow plough blades)
Bump stops.

Processing can be carried out by hand or by dispensing machine

- 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

Storage

- It is recommended to store NEUTHANE 803 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.
- Recovery Procedure: If partial or entire freezing occurs, it is recommended to rapidly melt out NEUTHANE 803 ISO XP at 70°C, typically for 16 hours or overnight

Hand Processing

1. Long pot life enables hand processing
2. Melt ISO component at 30-40°C, POLYOL component at 50-60° for 12-24 hours and NEUTHANE CA14 at 40°C for 12-24 hours
3. Ensure components are completely liquid and thoroughly mixed prior to use
4. Bring all components to the recommended process temperature.
5. Add pigments and Antifoam (as applicable) to the polyol component whilst mixing
6. It is recommended that air be removed from the ISO component under vacuum prior to addition of the curative
7. 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)
8. Remove air under vacuum
9. Cast into moulds, preheated to the recommended temperature
10. Cure as recommended

NEUTHANE 803XP Bespoke Pre-Catalysed system options are available, tailored to your needs and requirements.

NEUTHANE 803XP Series MDI - PPG Ether Quasi System

NEUTHANE GRADE		803/45XP	803/50XP	803/55XP	803/60XP	803/65XP	803/70XP
Mix Ratio NEUTHANE 803 ISO-XP	By weight	100	100	100	100	100	100
Mix Ratio NEUTHANE 803 POLY-XP	By weight	385.4	358.8	332.4	305.3	280.7	228.6
Mix Ratio NEUTHANE CA14	By weight	11.6	12.4	13.3	14.1	14.9	16.7
NEUTHANE 803ISO-XP Operating Temperature (OT)	°C	30	30	30	30	30	30
NEUTHANE 803 POLY- XP Operating Temperature (OT)	°C	40	40	40	40	40	40
NEUTHANE CA14 Operating Temperature (OT)	°C	30	30	30	30	30	30
NEUTHANE 803 ISO-XP Viscosity / SG (at OT)	cPs / g/cm ³	1025/ 0.978	1025/ 0.978	1025/ 0.978	1025/ 0.978	1025/ 0.978	1025/ 0.978
NEUTHANE 803 POLY-XP Viscosity / SG (at OT)	cPs / g/cm ³	686 / 1.02	686 / 1.02	686 / 1.02	686 / 1.02	686 / 1.02	686 / 1.02
NEUTHANE CA14 Viscosity / SG (at OT)	cPs / g/cm ³	55 / 1.004	55 / 1.004	55 / 1.004	55 / 1.004	55 / 1.004	55 / 1.004
Recommended Mould Temperature	°C	80 – 90	80 – 90	80 – 90	80 – 90	80 – 90	80 – 90
Pot life – adjustable with catalyst	minutes	2-3	2-3	2-3	2-3	2-3	2-3
Recommended Cure Temperature / Time	°C / hrs	90 /16	90 /16	90 /16	90 /16	90 /16	90 /16

Hardness	ISO 48-4	Shore A	45	50	55	60	65	70
	ISO 48-4	Shore D	-	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	160 (1.1)	200 (1.4)	216 (1.5)	264 (1.8)	315 (2.2)	481 (3.3)
300% Modulus	ISO 37	lb/in ² (MPa)	292 (2.0)	392 (2.7)	428 (3.0)	537 (3.7)	642 (4.4)	964 (6.7)
Tensile Strength	ISO 37	lb/in ² (MPa)	1180 (8.1)	1769 (12.2)	1682 (11.6)	2074 (14.3)	2755 (19.0)	2784 (19.2)
Elongation at Break	ISO 37	%	739	818	728	778	856	792
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	174 (30.0)	224 (39.2)	216 (37.8)	261 (45.6)	273 (47.8)	327 (57.2)
Tear Trouser	ISO 34-1	lbf/in (kN/m)	69 (12.0)	69 (12.0)	69 (12.0)	100 (17.5)	94 (16.5)	106 (18.6)
Resilience	ASTM D 2632-92	%	51	52	50	50	46	49
Abrasion loss	ISO 4649	mm ³	182	178	166	153	130	123

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. **Data collected with NEUTHANE CAT062, please contact Notedome to request a suitable catalyst recommendation according to your application



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NEUTHANE GRADE		803/75XP	803/80XP	803/85XP	803/90XP	803/95XP
Mix Ratio NEUTHANE 803 ISO-XP	By weight	100	100	100	100	100
Mix Ratio NEUTHANE 803 POLY-XP	By weight	214.4	183.4	164.6	141.6	116.3
Mix Ratio NEUTHANE CA14	By weight	17.1	18.1	18.8	19.5	20.4
NEUTHANE 803ISO-XP Operating Temperature (OT)	°C	30	30	30	30	30
NEUTHANE 803 POLY-XP Operating Temperature (OT)	°C	40	40	40	40	40
NEUTHANE CA14 Operating Temperature (OT)	°C	30	30	30	30	30
NEUTHANE 803 ISO-XP Viscosity / SG (at OT)	cPs / g/cm ³	1025/ 0.978	1025/ 0.978	1025/ 0.978	1025/ 0.978	1025/ 0.978
NEUTHANE 803 POLY-XP Viscosity / SG (at OT)	cPs / g/cm ³	686 / 1.02	686 / 1.02	686 / 1.02	686 / 1.02	686 / 1.02
NEUTHANE CA14 Viscosity / SG (at OT)	cPs / g/cm ³	55 / 1.004	55 / 1.004	55 / 1.004	55 / 1.004	55 / 1.004
Recommended Mould Temperature	°C	80 – 90	80 – 90	80 – 90	100-110	100-110
Pot life – adjustable with catalyst	minutes	2-3	2-3	2-3	2-3	2-3
Recommended Cure Temperature / Time	°C / hrs	90 /16	90 /16	90 /16	90 /16	90 /16

Hardness	ISO 48-4	Shore A	75	80	85	90	95
	ISO 48-4	Shore D	-	-	-	-	-
100% Modulus	ISO 37	lb/in ² (MPa)	502 (3.5)	700 (4.8)	819 (5.6)	1138 (7.9)	1479 (10.2)
300% Modulus	ISO 37	lb/in ² (MPa)	1024 (7.1)	1308 (9.0)	1479 (10.2)	1900 (13.1)	2234 (15.4)
Tensile Strength	ISO 37	lb/in ² (MPa)	2879 (19.9)	2973 (20.5)	3089 (21.3)	3205 (22.1)	4096 (28.3)
Elongation at Break	ISO 37	%	548	721	593	575	490
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	340 (59.5)	353 (61.8)	364 (63.6)	431 (75.4)	478 (83.6)
Tear Trouser	ISO 34-1	lbf/in (kN/m)	140 (24.5)	173 (30.3)	175 (30.7)	176 (30.8)	162 (28.4)
Resilience	ASTM D 2632-92	%	46	42	42	41	40
Abrasion loss	ISO 4649	mm ³	108	103	103	102	100

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NEUTHANE GRADE		803/55D XP	803/60D XP	803/65D XP	803/70D XP	801/75D XP
Mix Ratio NEUTHANE 803 ISO-XP	By weight	100	100	100	100	100
Mix Ratio NEUTHANE 803 POLY-XP	By weight	97.3	87.9	75	63	55.8
Mix Ratio NEUTHANE CA14	By weight	21.0	21.3	21.7	22.1	22.3
NEUTHANE 803ISO-XP Operating Temperature (OT)	°C	30	30	30	30	30
NEUTHANE 803 POLY- XP Operating Temperature (OT)	°C	40	40	40	40	40
NEUTHANE CA14 Operating Temperature (OT)	°C	30	30	30	30	30
NEUTHANE 803 ISO-XP Viscosity / SG (at OT)	cPs / g/cm ³	1025/ 0.978	1025/ 0.978	1025/ 0.978	1025/ 0.978	1025/ 0.978
NEUTHANE 803 POLY-XP Viscosity / SG (at OT)	cPs / g/cm ³	686 / 1.02	686 / 1.02	686 / 1.02	686 / 1.02	686 / 1.02
NEUTHANE CA14 Viscosity / SG (at OT)	cPs / g/cm ³	55 / 1.004	55 / 1.004	55 / 1.004	55 / 1.004	55 / 1.004
Recommended Mould Temperature	°C	110-120	110-120	110-120	110-120	110-120
Pot life – adjustable with catalyst	minutes	2-3	2-3	2-3	2-3	2-3
Recommended Cure Temperature / Time	°C / hrs	90 /16	90 /16	90 /16	90 /16	90 /16

Hardness	ISO 48-4	Shore A	-	-	-	-	-
	ISO 48-4	Shore D	55	60	65	70	75
100% Modulus	ISO 37	lb/in ² (MPa)	1711 (11.8)	2001 (13.8)	2530 (17.0)	3060 (21.1)	-
300% Modulus	ISO 37	lb/in ² (MPa)	2799 (19.3)	2813 (19.4)	3487 (24.0)	4162 (28.7)	-
Tensile Strength	ISO 37	lb/in ² (MPa)	4988 (34.4)	3944 (27.2)	4082 (28.1)	4220 (29.1)	3785 (26.1)
Elongation at Break	ISO 37	%	533	502	400	303	109
Tear (Die C)	ISO 34-1	lbf/in (kN/m)	601 (105)	681 (119)	824 (144)	967 (169)	784 (137.0)
Tear Trouser	ISO 34-1	lbf/in (kN/m)	282 (49.3)	336 (58.8)	331 (58.0)	326 (57.0)	181 (31.7)
Impact Strength	ISO 180/1 A (Notched)	kJ / m ²	29.0	42.0	57.0	61.0	59.3
HDT	ISO75-1	°C	30	31	35	39	46

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