



# Company Introduction

[www.notedome.com](http://www.notedome.com)





## Introduction

Specialising in the manufacture of high performance polyurethane cast elastomers, Notedome has been established for 40 years. During this period we have developed a strong reputation as one of the leading suppliers of these versatile systems.

The combination of our dedicated focus on cast urethane elastomers and the latest technology in production and laboratory equipment make Notedome a valuable partner for your business.

Success comes from our ability to fine-tune urethane chemistry to meet the specific requirements of our customers.

Notedome are certified to ISO 9001:2015



## Our Production Facility

Utilising a modular approach to our production facility, we planned to maximise our flexibility by having a selection of reaction/blending vessels covering a broad range of capacity.

This allows Notedome to:

- Offer a wide product portfolio with systems formulated from TDI, MDI and Aliphatic isocyanates.
- Become a development partner for customers on new projects as our vessels easily allow for manufacture of pilot batches of new systems through to small scale production trial batches.
- Maintain scalable production capacities to produce special / bespoke grades and support developing accounts or new applications.
- Optimise production planning to maintain short delivery times.

The flexibility of approach also extends to toll manufacturing of customer formulations provided the systems are solvent free.







### A Global Supplier

Supplied worldwide, our durable elastomers perform in a wide variety of applications in many industries.

Either on a direct basis or through our established and knowledgeable distributors / agents, we pride our ourselves on our responsive service to both commercial and technical aspects.

Please email [sales@notedome.co.uk](mailto:sales@notedome.co.uk) should you have any queries relating to distribution in your territory.



### Technical Service and R&D

Our well equipped laboratories support our customers in many aspects of polyurethane cast elastomer development and process development.

Continuing our customer focused approach, we can offer assistance with:

- Material identification using both internal and externally sourced analytical methods.
- Physical property testing to support process control or application development.
- Rapid material characterisation to assist with process troubleshooting.



Many of the technical team at Notedome have experience casting both TDI and MDI based systems in a manufacturing environment.

This familiarity allied with our lab dispensing machine allows for process development of systems using customer moulds at Notedome.

By following this structured approach, we can limit the downtime sometimes associated with production trials.



## Our Systems

The range of Neuthane polyurethane cast elastomers is diverse in both the chemistry of raw materials used to formulate the polymeric chains and also their suitability for different processing techniques.

By combining PPG polyether, PTMEG polyether, polyester, polycaprolactone or polycarbonate polyols with either aromatic or aliphatic isocyanates the number of combinations is huge. Combined with our customer and application focused approach, this allows for a high degree of optimisation of both elastomer performance and processing behaviour.

This broad range of elastomer performance results in Neuthane polyurethanes being used in many industries and applications.

## Typical Applications

### • Steel and Paper Mill Manufacture

Rollers : bridle, looper, nip, hold down, squeegee, spool etc.  
Coil coating rollers : paint & lacquer  
Coil protection pads  
Expanding mandrels  
Acid resistant squeegee rollers



### • Mining & Quarrying

Belt scraper and plough blades  
Separator screens  
Truck & chute liners  
Hydro-cyclones  
Pipe liners  
Pump liners and impellers



### • Oil and Gas / Offshore:

Pipe cleaning, survey and batching pigs  
Gaskets  
Fenders  
Bend restrictors



### • And many other applications including:

Concrete moulds  
Cutting anvils  
In-line roller blade wheels  
Isostatic pressing  
Oil seals  
Press blocks  
Screen printing blades

The following technical references specify our product range and different material categories:

Product reference guide

NEUTHANE SERIES		TDI POLYETHER PREPOLYMERS				
		100	100LV	2100	100	300
Chemistry		PTMEG	PTMEG Low Viscosity	PTMEG Low Odour	PPG:PTMEG Blend	PPG
Shore A	Shore D					
30 - 50						
55						
60						
65						
70						
75		122				
80		128 +S	128LV		127	
85		132 +S		2132		335 / 343
90		143 / 155 +S	143LV	2143	142	353
95	45	163 +S		2163	162	363
	50					
	60					
	65		164LV			
	70			2192LV		
	75					
	80					
	85					

TDI POLYESTER	MDI POLYETHER			MDI POLYESTER		TDI COLD CAST
200	600	801	803	700	802	CON
Ester / Caprolactone	PTMEG Prepolymer	PTMEG QUASI	PPG QUASI	Prepolymer	QUASI	PPG
					802/45AW	30/40/50 CON
		801-55	803/55		802/55AW	
		801-60	803/60		802/60AW	60 CON
230*		801-65	803/65		802/65AW	
		801-70	803/70		802/70AW	70 CON / T357
225		801-75	803/75		802/75AW	75 CON
232*	660 HR / 663 HR	801-80	803/80	760 HR	802/80AW	
235	674 HR	801-85	803/85	765 (HR & AW)	802/85AW	85 CON / T357
242/244*	675 / 675 HR	801-90	803/90	775 HR	802/90AW	
254/255*	695 / 695 HR	801-95	803/95	795 (HR & AW)	802/95AW	
			803/65D			
			803/75D			
			803/83D			

Available in both 2K and 3K series      Available in both 2K and 3K series

There are many other products available. Please contact us for further information and/or to assist you with your bespoke requirements.

Key	S = Long Pot-Life    LV = Low Viscosity    HR = High Resilience    AW = Advanced Wearing
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* = Caprolactone
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Product selector

The following table gives an indication of the performance characteristics offered by each of the Neuthane series.

Neuthane Series	Cost	Processing	Abrasion	Dynamic	Resilience	Solvent	Humid/Wet	High Temp	UV Stability
100 (TDI-PTMEG)	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Excellent / Good	Good / Average
100 (TDI-PPG/PTMEG)	Good / Average	Excellent / Good	Good / Average	Good / Average	Excellent / Good	Good / Average	Good / Average	Good / Average	Good / Average
2100 (TDI-PTMEG Low Odour)	Good / Average	Excellent / Good	Excellent / Good	Excellent / Good	Excellent / Good	Good / Average	Good / Average	Excellent / Good	Good / Average
200 (TDI-Ester)	Excellent / Good	Good / Average	Excellent / Good	Good / Average	Good / Average	Excellent / Good	Good / Average	Good / Average	Good / Average
200 (TDI-Caprolactone Ester)	Good / Average	Excellent / Good	Excellent / Good	Good / Average	Good / Average	Excellent / Good	Good / Average	Good / Average	Good / Average
300 (TDI-PPG)	Excellent / Good	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average
500 (Aliphatic-PTMEG)	Good / Average	Excellent / Good	Excellent / Good	Excellent / Good	Excellent / Good	Good / Average	Excellent / Good	Excellent / Good	Excellent / Good
600 (MDI-PTMEG Prepolymer)	Good / Average	Good / Average	Excellent / Good	Excellent / Good	Excellent / Good	Good / Average	Excellent / Good	Good / Average	Good / Average
700 (MDI-Ester Prepolymer)	Excellent / Good	Good / Average	Excellent / Good	Good / Average	Good / Average	Excellent / Good	Good / Average	Good / Average	Good / Average
801 (MDI-PTMEG Quasi)	Good / Average	Good / Average	Excellent / Good	Excellent / Good	Excellent / Good	Good / Average	Good / Average	Good / Average	Good / Average
802 (MDI-Ester Quasi)	Excellent / Good	Good / Average	Excellent / Good	Good / Average	Good / Average	Excellent / Good	Good / Average	Good / Average	Good / Average
803 (MDI-Ester Quasi)	Excellent / Good	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average	Good / Average
3100 (MDI-PTMEG Rotational)	Good / Average	Excellent / Good	Excellent / Good	Excellent / Good	Excellent / Good	Good / Average	Good / Average	Good / Average	Good / Average
3200 (MDI-Ester Rotational)	Excellent / Good	Excellent / Good	Excellent / Good	Good / Average	Good / Average	Excellent / Good	Good / Average	Good / Average	Good / Average

Key Excellent / Good Good / Average Average / Poor



Chemical Resistance

Samples of both PTMG-Ether and Polyester based Elastomers were immersed for seven days at 75 degrees Fahrenheit in various chemicals. Samples were then removed, dried and measured for volume swell. Ratings were given based on the following key:

A = Excellent

B = Good

C = Fair

D = Poor

CHEMICAL	B = Good		CHEMICAL	D = Poor		CHEMICAL	B = Good		CHEMICAL	D = Poor	
	Ether	Ester		Ether	Ester		Ether	Ester		Ether	Ester
ACETALDEHYDE	D	D	ASTM REFERENCE FUEL B	B	B	GLYCOLIC ACID	B	B-C	SODIUM ACETATE	A-B	B
ACETIC ACID	D-C	D	BENZALDEHYDE	C-B	D	HEPTANE	A	B	SODIUM BORATE	B	B
ACETIC ANHYDRIDE	D	D	BENZENE	D	D	HEXANE	A	B	SODIUM CARBONATE	B	B
ACETONE	D	D	BORIC ACID	A	B	HYDRAZINE	D	D	SODIUM CHLORIDE	B	B
ACETYL BROMIDE	D-C	D	BROMINE	B-C	B-C	HYDROBROMIC ACID	B	B	SODIUM DICHROMATE	B	B
ACETYL CHLORIDE	C-D	D	BUTANE	A	B-C	HYDROCHLORIC ACID	B	B	SODIUM FERROCYANIDE	B	B
ACETYLENE	B-C	C	BUTYL ACETATE	D	D	HYDROCHLORIC ACID (20%)	B	B-C	SODIUM HYDROSULFITE	B	B
ADIPIC ACID	A	B	BUTYL ALCOHOL	B	C	HYDROFLUORIC ACID	B-C	C	SODIUM HYDROXIDE (45%)	B	B
ALUMINIUM CHLORIDE	B	B	CALCIUM CHLORIDE	A	B	HYDROGEN	A-B	B	SODIUM HYPOCHLORITE (5%)	D	D
ALUMINIUM SULFIDE	B	B	CALCIUM NITRATE	B	B	HYDROGEN PEROXIDE	B	B	SODIUM NITRATE	B	B
ALUMINIUM SULPHATE	B	B	CARBON TETRACHLORIDE	C	D	HYDROGEN SULFIDE	C-D	D	SODIUM SILICATE	A-B	B
AMMONIA	B	B-C	CASTER OIL	A-B	B	HYDROIODIC ACID	B	B	SPERRY OIL	B	B-C
AMMONIUM ACETATE	C-D	C-D	CHLOROACETIC ACID	C-D	D	IODINE SOLUTION	A	B	STYRENE	B	B
AMMONIUM CARBONATE	B	B	CHLOROFORM	D	D	ISOOCTANE	B	B	SULPHUR DIOXIDE	B	B-C
AMMONIUM HYDROXIDE	A-B	B	CHROMIC ACID	C-D	D	ISOPROPYL ETHER	B	B-C	SULFURIC ACID (10-50%)	C-D	D
AMMONIUM NITRATE	B	B-C	CHROMIUM POTASSIUM SULPHATE	B	B	KEROSENE	B	B-C	TANNIC ACID (10%)	A	B
AMMONIUM PERSULFATE	B	B	CITRIC ACID	B	B	LEAD ACETATE	B	B	TARTARIC ACID	A	A-B
AMMONIUM SULPHATE	B	B	CYCLOHEXANONE	D	D	MAGNESIUM HYDROXIDE	A	A-B	TOLUENE	D	D
AMMONIUM SULFIDE	B	B	CYCLOHEXANE	B	B	METHYL ALCOHOL	D	C	TRICHLOROACETIC ACID	D	D
AMMONIUM THIOCYANIDE	B	B	DIBUTYL PHTHALATE	C-D	D	METHYLENE CHLORIDE	D	D	TRICHLOROETHYLENE	D	D
AMYL ACETATE	D	D	DIBUTYL ETHER	B	B	NAPHTHALENE	B	B-C	TRICRESYL PHOSPHATE	C-D	D
AMYL ALCOHOL	C	C-D	DICHLOROBENZENE (Ortho)	C	C	NITRIC ACID	D	D	TRIETHANOL AMINE	B	B
AMYL CHLORIDE	C	C	DODECYL MERCAPTAN	B-C	B	NITROBENZENE	D	D	TRISODIUM PHOSPHATE	B	B
ANILINE	D	D	DIMETHYL ACETAMIDE	D	D	OXALIC ACID (5%)	A	A-B	TURPENTINE	C	B
ANILINE HYDROCHLORIDE	D	D	DIMETHYL FORMAMIDE	D	D	OXYGEN	A	A	UREA	B	B
AQUA REGIA	D	D	ETHYL CHLORIDE	C	C-D	PERCHLOROETHYLENE	C-D	D	WATER	B	B
ASTM OIL #1	A-B	A	ETHYLENE GLYCOL	B	B-C	PHOSPHORIC ACID (dil)	B-C	C	WHITE SPIRIT	A	B
ASTM OIL #2	B	A	FORMALDEHYDE	C	B	POTASSIUM CYANIDE	A	B	XYLENE	C	C-D
ASTM #3	B	A	FORMIC ACID	C-D	D	PROPANE	B	B	ZINC CHLORIDE	B	B
ASTM REFERENCE FUEL A	A	A-B	GLYCERINE (GLYCEROL)	A	A-B	PROPYLENE GLYCOL	B	B	ZINC SULPHATE	B	B

Material Categories

**Polyols**

*Polyether*

- Excellent hydrolytic stability
- Bacterial resistance
- Excellent mechanical properties
- Low temperature flexibility
- Excellent sliding abrasion resistance

*Polyester*

- Oil/solvent resistance
- High impact abrasion resistance
- Excellent mechanical properties
- Temperature resistance

*Caprolactones*

- High tear strength
- Good hydrolytic resistance
- High tensile strength
- Solvent resistance
- High impact abrasion resistance
- Low heat build up

**Isocyanates**

*Methylene Diphenyl Diisocyanate*

- Excellent physical properties
- Good tensile strength
- High resilience
- Excellent hydrolytic stability v. TDI

*Toluene Diisocyanate*

- Long Pot-Life
- Low viscosity
- Ease of processing

*Aliphatic*

- UV Resistant
- High chemical resistance
- Acid resistant
- Excellent hydrolytic stability





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