



**High quality engineered  
components in Polyurethane**

# Component manufacturing services in polyurethane for products with exceptional qualities and performance



*Unitex Limited has been a leader in the production of Polyurethane products for many years. Manufacturing custom components for a wide range of industrial applications. Unitex specialise in innovative design solutions incorporating superior performing materials.*

## What is Ulon?

Ulon is a superior grade of Polyurethane elastomer manufactured from Vulkollan®, Ulon can be customised to almost any application area. Ulon's excellent dynamic and mechanical properties make it suitable for a diverse range of demanding applications and a market leader in terms of performance.

Ulon is frequently used where other elastic materials cannot meet the required performance demands and specifications. Unitex is one of an extremely limited number of companies licenced to process and manufacture worldwide. We are acknowledged by the licensor as one of the finest processors of Vulkollan® today.

## Production processes available include:

### Moulding:

- Rotational moulding
- Compression moulding
- Cast moulding

### Fabrication:

- Splitting
- Grinding
- Turning
- Buffing
- Cutting
- Trimming

# thane rformance.



## Quality

- We are accredited to BS EN ISO 9001-2000 and have now attained accreditation to BS EN ISO 14001 with various industry standard approvals

Our (ULON) polyurethane is ideal for a vast range of engineering applications. It is available in a wide range of hardness from 55 – 95 shore A. The material combines the advantages of rigid plastic, metals and ceramics with the extensibility of rubber.

## Advantages of ULON:

- Excellent performance in abrasive environments
- Outstanding tear and cut resistance
- High resistance to oil and greases
- Operational temperature range from -35°C to 80°C, with limited periods of up to 120°C
- High impact resistance, low compression with good sound deadening properties
- Ulon can be machined, bonded to metals, elastomers and most plastics

## Products manufactured in ULON include:

- Sheeting and Gaskets
- Seals, Washers
- Drive and Bearing components
- Roller coverings
- Wear and corrosion resistant linings
- Flexible moulds
- Couplings
- Hydro cyclones
- Scraper and wiper blades
- Bump stops
- Pulley wheels
- Gears
- Erosion strips
- Squeegees
- Pistons

## Typical applications include:

- Cement impellers
- Wing and propeller erosion strips
- Food processing
- Recovering of products

## Compounds available (ULON):

Our compounds are available in the hardness range 55 – 95 with 5 degree increments.

In addition we have the capability to compression mould Neoprene and Viton rubber compounds.

## A guide for the selection of polymer

Base Polymer	ULON	Natural Rubber	SBR	EPDM	Neoprene CR	Nitrile	Viton FPM
<b>Hardness Range (Shore A)</b>	55 – 95°	30 – 95°	40 – 95°	30 – 85°	30 – 90°	40 – 100°	50 – 95°
<b>Heat Resistance</b>							
Max. Continuous	80°C	75°C	85°C	130°C	95°C	100°C	205°C
Max. Intermittent	115°C	105°C	115°C	150°C	125°C	130°C	300°C
<b>Low Temperature Resistance</b>							
	-35°C	-60°C	-55°C	-50°C	-40°C	-20°C	-20°C
<b>Resistance to</b>							
Oxidation	Excellent	Fair	Fair	Excellent	Very Good	Good	Excellent
Ozone & Weathering	Excellent	Poor	Poor	Excellent	Very Good	Fair	Excellent
<b>Oil Resistance</b>							
ASTM oil No.1 @ 20°C	Excellent	Poor	Poor	Fair	Excellent	Excellent	Excellent
ASTM oil No.1 @ 100°C	Good	N/A	N/A	N/A	Good	Good	Excel*
ASTM oil No.3 @ 20°C	Good	N/A	N/A	N/A	Good	Excellent	Excellent
ASTM oil No.3 @ 100°C	Fair	N/A	N/A	N/A	Fair	Good	Excel*
<b>Fuel Resistance</b>							
ASTM Fuel B @ 40°C	Fair	N/A	N/A	N/A	Poor	Fair	Excellent
<b>Solvent Resistance</b>							
Alcohol	Fair	Good	Good	Good	Good	Good	Good
Acetone	N/A	Fair	Fair	Good	Fair	N/A	N/A
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	Good
<b>Chemical Resistance</b>							
Acids	Very Good	Fair	Fair	Good	Good	Good	Excellent
Bases	Very Good	Good	Good	Good	Fair	Fair	Good
<b>Physical Strength</b>	Excellent	Excellent	Good	Good	Good	Good	Poor
<b>Compression Set</b>	Good	Good	Good	Good	Fair to Good	Good	Good
<b>Tear &amp; Abrasion Resistance</b>	Excellent	Excellent	Good	Good	Good	Good	Poor
<b>Permeability to Gases</b>	Low	Poor	Fairly Low	Fairly Low	Low	Low	Very Low
<b>Electrical Strength</b>	Excellent	Excellent	Excellent	Excellent	Good	Poor	Good
<b>Flame Resistance</b>	Poor	Poor	Poor	Poor	Self-extinguishing	Poor	Self-extinguishing
<b>Water Resistance</b>	Good	Very Good	Good	Excellent	Good	Good	Good
<b>Resilience</b>	Very Good	Excellent	Good	Very Good	Very Good	Good	Fair

This table is for a general guide. It is not to be taken as definitive as unforeseen service factors can alter choice.

Note: Where marked (Excel\*) – Excellent at 150°C      Where marked (N/A) – Not advisable or unsatisfactory

## Additional engineering polymers available:

For specialist applications we are able to tune performance using a range of engineering polymers. Our range includes both natural and synthetic rubber together with Fluoro Elastomers.

## Advantages of Neoprene:

- Operational temperature range from -35°C to 95°C, with limited periods up to 125°C
- Very good resistance to oxidation, ozone and weathering
- Good chemical resistance to acids
- Is Classed as self-extinguishing with regard to flame resistance
- Very good resilience properties

Neoprene compounds are suitable for the following applications:

- Most general mechanical and engineering applications
- Used in Marine application due to good ozone resistance

## Compounds available (Neoprene):

- NAR 70

## Advantages of Viton:

- Operational temperature range from -20°C to 205°C, with limited periods up to 300°C
- Outstanding resistance to oxidation, ozone and weathering
- Excellent oil resistance to 150°C
- Chemically resistant to acids
- Very low gas permeability

Fluoroelastomer (Viton) compounds have extremely high service temperature capabilities and are suitable for the following applications:

- Situations requiring resistance to aggressive fluids at high temperatures
- Very low compression set at high temperatures, ideal for 'O' rings.

## Compounds available (Viton):

In the hardness range 85 – 95 shore A.





Halfpenny lane  
Knaresborough  
North Yorkshire  
HP5 OPP, UK

**Tel:** +44 (0) 1423 862677

**Fax:** +44 (0) 1423 868340

**Email:** [sales@unitex.co.uk](mailto:sales@unitex.co.uk)

**Web:** [www.unitex.co.uk](http://www.unitex.co.uk)



Trelleborg Industries UK Limited - Registration No 2461518  
Registered office address: Ashchurch, Tewkesbury,