Ulon®

Bespoke solutions for engineers

Ulon® is our superior grade of polyurethane elastomer material manufactured from Vulkollan® , which can be customized for use on almost any application area. As a market leader in terms of performance, its excellent dynamic and mechanical properties make it suitable for a diverse range of demanding engineering applications. Ulon® is frequently used where other elastic materials cannot meet the required performance demands and tight specifications requested by the end user.

Benefits:

- Made from Vulkollan® - one of the most innovative and technically advanced elastomers in the world - outstanding abrasive, tear and cut resistance
- Excellent performance characteristics for the most demanding engineering applications - high impact resistance, low compression with good sound deadening properties. Resilient to oil and grease
- Good operational temperature range - ranges from -35˚C to 80˚C, with limited periods of up to 120˚C
- Very versatile - Ulon® can be machined or bonded to metals, elastomers and most plastics. CAD software is used to ensure parts are manufactured to specified tolerances

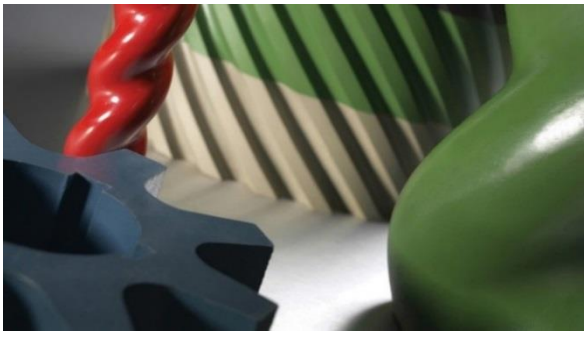
Production processes available include

Moulding:

- Rotational moulding
- Compression moulding
- Cast moulding

Fabrication:

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



Applications:

Ulon® is ideal for a vast range of engineering applications and 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 flexibility of rubber. Products manufactured in Ulon include:

- Erosion strips
- Scraper blades
- Seals and washers
- Sheets
- Wash up / Doctors blades
- Wheels

Typical applications include:

- Cement impellors
- Wing and propeller erosion strips
- Food processing
- Recovery of products

Quality:

We are certified to ISO 9001 and ISO 14001 as well other industry standard approvals.

Ulon® - compounds available

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.

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 oxidisation, 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: NAR 70

Advantages of Viton:

- Operational temperature range from -20°C to 205°C, with limited periods up to 300°C
- Outstanding resistance to oxidisation, 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: In the hardness range 85 – 95 shore A

Polymer selection guide *

Base Polymer	Ulon®	Natural Rubber	SBR	EPDM	Neoprene CR	Nitrile	Viton FPM
Hardness Range (Shore A)	55 – 95°	30 – 95°	40 – 95°	30 – 85°	30 – 90°	40 – 100°	50 – 95°
Heat Resistance							
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
Low Temperature Resistance	-35°C	-60°C	-55°C	-50°C	-40°C	-20°C	-20°C
Resistance to							
Oxidation	Excellent	Fair	Fair	Excellent	Very Good	Good	Excellent
Ozone & Weathering	Excellent	Poor	Poor	Excellent	Very Good	Fair	Excellent
Oil Resistance							
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 *
Fuel Resistance							
ASTM Fuel B @ 40°C	Fair	N/A	N/A	N/A	Poor	Fair	Excellent
Solvent Resistance							
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
Chemical Resistance							
Acids	Very Good	Fair	Fair	Good	Good	Good	Excellent
Bases	Very Good	Good	Good	Good	Fair	Fair	Good
Physical Strength	Excellent	Excellent	Good	Good	Good	Good	Poor
Compression Set	Good	Good	Good	Good	Fair to Good	Good	Good
Tear & Abrasion Resistance	Excellent	Excellent	Good	Good	Good	Good	Poor
Permeability to Gases	Low	Poor	Fairly Low	Fairly Low	Low	Low	Very Low
Electrical Strength	Excellent	Excellent	Excellent	Excellent	Good	Poor	Good
Flame Resistance	Poor	Poor	Poor	Poor	Self-extinguishing	Poor	Self-extinguishing
Water Resistance	Good	Very Good	Good	Excellent	Good	Good	Good
Resilience	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 unforseen service factors can alter choice. Note: Excel * - excellent at 150°C N/A - not advisable

Contact Us

Trelleborg Applied Technologies delivers innovative and reliable solutions that maximize business performance to meet your needs. Our dedicated and highly skilled staff are always on hand to provide seamless process support from initial idea, through to delivery and beyond.

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