



WILLIAM JOHNSTON **& COMPANY LIMITED**

Glasgow Tel: +44 (0) 141 620 1666 | Inverness Tel: +44 (0) 1463 238 673
sales@williamjohnston.co.uk | www.williamjohnston.co.uk

Rubber mouldings to ISO 3302 1995 (BS 3734) materials

Commercial and Precision Tolerances offered.

Please ask for our [RUBBER MOULDING TOLERANCEWS ISO 3302 1995 WJ.pdf](#)

Disclaimer

Please note, failure to select the correct materials or products we supply ("the Products") may result in damage to plant, equipment or property. In some instances, it may cause death or personal injury. We are not designers and do not give advice about design related matters concerning the Products. We can help and assist with the technical specifications for the Products. In specific applications, particularly where critical conditions exist, we will try to assist you within the limitations of the services that we offer. All information supplied by us is intended as technical co-operation outlining the specifications of the different Products which we supply. To the extent permitted in law, no warranty is given in respect of any information supplied by us. The customer must satisfy themselves as to the suitability of the Products for their intended application and use. The correct fitting of Products is the responsibility of the customer. Your statutory rights remain unaffected. Save in respect of death, personal injury or fraud, our entire liability to you, however arising from the supply of Products shall be limited to the £10M indemnity amount provided by our insurers.

William Johnston & Company Limited- is recognised for technical ability, customer service and quality accreditation and supply custom rubber mouldings, thermoplastics, rubber injection mouldings, compression, and transfer rubber mouldings with recognised approvals for specific industries. We offer a wide range of rubber compounds meeting many industrial specifications including British and European standards, Automotive, MOD, WRAS and FDA requirements

Elastomer Types Overview - there is a wide variety of polymers available, each with their own unique properties. We recommend that our Technical Department is involved at the earliest opportunity to optimise all the various aspects of the product or service requirements and together find the most effective compound and efficient solution that will result in a technically accurate, cost effective and high quality end product for you.

WRAS approved EPDM compounds - is used for cold and hot potable water use to the requirements of the UK, German and French water industry.

Nitrile compounds – are approved to EN 549, EN 682 for gas applications and by WRAS for cold potable water use.

Fluorocarbon (FKM) and Hydrogenated Nitrile (HNBR) compounds – are approved for use in Well Head safety equipment.



William Johnston & Company Limited are able to offer compounds that conform to **British Standards, ISO, Def Stan (Defence Standard), DTD specifications, ASTM, AMS, WRC, WRAS and SAE**. Below is an overview of some of the most common elastomers which we supply but please contact us for more specific information and assistance.

	Natural Rubber	SBR	EPDM	Neoprene (CR)	Hypalon* (CSM)	Nitrile (NBR)	Acrylic (ACM)	Silicone (Si)	Viton* (FPM/FKM)	Fluro- silicone (FSi)
	Natural Rubber	SBR	EPDM	Neoprene (CR)	Hypalon* (CSM)	Nitrile (NBR)	Acrylic (ACM)	Silicone (Si)	Viton*(FPM)	Fluro- silicone (FSi)

Basic Properties

Cost Factor	1	1	2	2	3	2	4	6	15	40
Hardness Range (Shore A)	30 - 90°	40 - 95°	30 - 85°	30 - 90°	40 - 85°	40 - 100°	50 - 85°	40 - 80°	50 - 95°	40 - 80°
Colours	Full Range	Full Range	Limited	Full Range	Limited	Limited	Black	Limited	Limited	Limited

Temperature Tolerances *(degrees Celsius)*

Maximum Continuous	75°	85°	130°	95°	130°	100°	150°	205°	205°	180°
Maximum Intermittent	105°	115°	150°	125°	160°	130°	180°	300°	300°	200°
Minimum Temperature	-60°	-55°	-50°	-40°	-25°	-20°	-20°	-60°	-20°	-60°

Environmental Tolerances

Oxidation	Fair	Fair	Excellent	Very Good	Excellent	Good	Excellent	Excellent	Excellent	Excellent
Ozone & Weathering	Poor	Poor	Excellent	Very Good	Excellent	Fair	Excellent	Excellent	Excellent	Excellent

Oil Resistance *(degrees Celsius)*

ASTM Oil No. 1 @ 20°	Poor	Poor	Fair	Excellent	Excellent	Excellent		Excellent	Excellent	Excellent
ASTM Oil No. 1 @ 100°	Poor	Poor	Poor	Good	Good	Good	Excellent	Good	Excellent	Excellent
ASTM Oil No. 3 @ 20°	Poor	Poor	Poor	Good	Excellent	Excellent		Good	Excellent	Excellent
ASTM Oil No. 3 @ 100°	Poor	Poor	Poor	Fair	Fair	Good	Good	Fair	Excellent	Excellent

Fuel Resistance *(degrees Celsius)*

ASTM Fuel B @ 40°	Poor	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Excellent	Fair
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Solvent Resistance *(@ 20° Celsius)*

Alcohol	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Acetone	Fair	Fair	Good	Fair	Fair	Poor	Poor	Fair	Unsuitable	Unsuitable
Benzene	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Good	Good

Chemical Resistance

Acids	Fair	Fair	Good	Good	Very Good	Good	Poor	Fair	Excellent	Good
Bases	Good	Good	Good	Fair	Good	Fair	Poor	Fair	Good	Fair

Physical Properties

Physical Strength	Excellent	Good	Good	Good	Good	Good	Good	Poor	Good	Poor
Compression Set	Good	Good	Good	Fair	Fair	Good	Good	Good	Good	Good

	Natural Rubber	SBR	EPDM	Neoprene (CR)	Hypalon* (CSM)	Nitrile (NBR)	Acrylic (ACM)	Silicone (Si)	Viton* (FPM/FKM)	Fluro- silicone (FSi)
Tear & Abrasion Resistance	Excellent	Good	Good	Good	Good	Good	Good	Poor	Good	Poor
Resilience	Excellent	Good	Very Good	Very Good	Fair	Good	Poor	Good	Fair	Fair

Resistance

Permeability To Gases	Poor	Low	Low	Low	Low	Low	Low	Low	Very Low	Low
Electrical Strength	Excellent	Excellent	Excellent	Good	Good	Poor	Fair	Excellent	Good	Excellent
Flame Resistance	Poor	Poor	Poor	Self - Extinguish	Good	Poor	Poor	Good	Self - Extinguish	Self - Extinguish
Water Resistance	Very Good	Good	Excellent	Good	Very Good	Good	Poor	Good	Good	Good

***Du Pont Registered Trade Mark | †Bayer Registered Trade Mark**

Our technical support team will guide you through every step, please call our Main Switchboard and your call will be directed to the most appropriate technical advisor.

Failure to select the correct materials or products can result in damage to plant and equipment and personal injury. In specific applications, where critical conditions exist, we suggest you contact us, and we will consider with you the most suitable material or product. However, information supplied by William Johnston & Company Limited is intended only as technical co-operation and as a guide to the various uses of different products. No warranty is given in respect of information or recommendations by William Johnston & Company Limited which are only given for guidance and without any guarantee. The customer must satisfy themselves on the suitability of the material or product for the intended purpose. The correct fitting of products particularly is the responsibility of the customer.