WILLIAM JOHNSTON
& COMPANY LIMITED

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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

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
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.