



WILLIAM JOHNSTON **& COMPANY LIMITED**

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ELASTOMERS



William Johnston & Company Limited have been involved with the manufacture and conversion of rubber since 1946. The company is ISO approved for quality within manufacture and maintains ongoing quality checks to maintain its reputation as one of the leaders in the gasket and sealing industry.

As we supply sheet, roll, strip, gasket and fabrications in a very wide range of materials known as elastomers we include a table below of the generic type of elastomer and some commonly requested information about each.

COMMON NAME	NATURAL	SBR	EPDM	NEOPRENE	CSM	NITRILE	ACRYLIC	VAMAC
CHEMICAL NAME	POLYISOPRENE	STYRENE BUTADIENE RUBBER	ETHYLENE PROPYLENE DIENE MONOMER	POLYCHLOROPRENE	CHLOROSULFYNOL POLYETHYLENE	ACRYLONITRILE BUTADIEN	POLYACRYLIC	ETHYLENE ACRYLIC
ABREVIATED NAME	NR	SBR	EPDM	CR	CSM	NBR	ACM	AEM
HARDNESS RANGE	30-95	40-95	30-85	30-90	40-85	40-100	50-85	45-90
HEAT RESISTANCE °C								
Maximum Continuous °C	75	85	130	95	130	100	150	150
Peak °C	105	115	150	125	160	130	180	180
Minimum °C	-60	-55	-50	-40	-25	-50	-20	-40

COMMON NAME	EPICHLOROHYDRIN	BUTYL	SILICONE	HNBR	FLOUROCARBON	FLOUROSILICONE	KALREZ
CHEMICAL NAME	EPICHLOROHYDRIN	POLYISOBUTYLENE	POLYSILOXANE	HYDROGENATED NITRILE	FLOUROCARBON	FLOUROSILICONE	PERFLOUROCARBON
ABREVIATED NAME	ECO	IIR	Q (VMQ)	HNBR	FKM	FQ	FFKM
HARDNESS RANGE	40-85	40-85	40-80	50-95	50-95	40-80	65-90
HEAT RESISTANCE °C							
Maximum Continuous °C	140	120	205	150	205	180	
Peak °C	160	135	300	180	250	200	325
Minimum °C	-30	-50	-60	-30	-40	-60	0

Each different elastomer has many variations in composition and the resultant product will then have variations within the Shore A hardness, tensile strength, abrasion resistance, electrical conductivity etc. On the next 2 pages you will find some common variations on each type .

BUTYL RUBBER				HYDROGENATED NITRILE BUTADIENE RUBBER (HNBR)				POLYCHLOROPRENE AND NEOPRENE® RUBBER			
BUTYL 40 (B 40)				HNBR 50 SHORE				POLYCHLOROPRENE 40 GREY			
BUTYL TO BS3227 B50 BLACK				HNBR 50 (BASIC PROPERTIES)				POLYCHLOROPRENE 40 (NON ETU)			
BUTYL 50 TO BS 3227:2003 GRADE B50				HNBR 50/60 SHORE				POLYCHLOROPRENE 50 GREEN NE			
BUTYL 60				HNBR 60 GRADE (HIGH TEAR) BLACK				POLYCHLOROPRENE 50 (NON ETU) (C 50)			
BUTYL (BS3227 (B60)(56-65)				HNBR 60 SHORE				POLYCHLOROPRENE 50 RED (PCR 50)			
CHLORO-BUTYL RUBBER GRADE 60 BLACK TO DEF STAN 93-86				HNBR 60 SHORE				POLYCHLOROPRENE 50 YELLOW			
BROMO BUTYL BS3227:2003 GRADE B60				HNBR 70 GREEN				POLYCHLOROPRENE 50-55			
EPDM (ETHYLENE PROPYLENE DIENE MONOMER) RUBBER				HNBR 70 ZSC				POLYCHLOROPRENE 55/60			
				HNBR 70				POLYCHLOROPRENE 60 NE GREY			
EPDM 20/25 BLACK				HNBR 70				POLYCHLOROPRENE 60 NE GREY (RAL 7036)			
EPDM 40 SHORE				HNBR 70 BLUE FDA COMPLIANT				POLYCHLOROPRENE 60 NON ETU. BS2752 C60			
EPDM 40/45 BLACK				HNBR 70 (BUTSER PAD BLEND)				POLYCHLOROPRENE 70 GREY (NE)			
EPDM 60 GREY				HNBR 80				POLYCHLOROPRENE YELLOW 55 SHORE			
EPDM 60 PEROXIDE				HNBR 80/85 BLUE				NEOPRENE 40 NON-BLOOMING (WITHOUT WAX)			
EPDM 65/75 BLACK				HNBR 90, BLACK. S.G. OF 1.25				NEOPRENE 40 (NE CR QX40) NON TYP			
EPDM 65/75 RED				HNBR GRADE 90, BLACK				NEOPRENE 60 (NE CR QX60) NON TYP			
EPDM 70 SHORE				NATURAL RUBBER (NR)				NEOPRENE C.40 (NON ETU)			
EPDM 70 BLACK INSULATIVE								NEOPRENE C.60 TO BS2752 (NON ETU)			
EPDM 70 RED				NR 30/35 BLACK.				NEOPRENE C.80 TO BS2752 BLACK			
EPDM 70 WHITE FDA APPROVED				NR 40 BLACK				NEOPRENE NON ETU 76-85 BLACK BS2752 C80			
EPDM 70 WHITE FDA COMPLIANT				NR 40 ELONGATION				NEOPRENE RUBBER TO BS2752 C50 BLACK IRHD 46-55			
EPDM 80				NR 40 GREY F/Q				NEOPRENE RUBBER TO BS2752 C60 IRHD 56-65			
EPDM 80 PEROXIDE DTD 5597A GRD 80				NR 40 LIGHT GREEN				NEOPRENE RUBBER TO BS2752 C70 IRHD 66-75			
EPDM 80 PEROXIDE. DTD5597A GRADE 80 BLACK				NR 40 LIGHT GREY				NEO POLYCHLOROPRENE BS2752 C40 BLACK NEOPRENE			
EPDM 80/85 FDA AQUEOUS				NR 40 OLIVE GREEN				NEO POLYCHLOROPRENE BS2752 C60 NE (NON ETU)			
EPDM HIGH ENB EPDM 80 PEROXIDE.				NR 40. BS 1154. (Z 40)				NEO POLYCHLOROPRENE BS2752 C70 NEOPRENE 66-75			
EPDM RUBBER APPROX 20 SHORE. (AVERAGE HARDNESS 22 SHORE)				NR 50 (Z 50)				POLYURETHANE RUBBER (POLY-U RUBBERS) (PUR)			
EPDM RUBBER GRADE 70 BLACK, (WATER COUNCIL TYPE)				NR 50 BLACK							
EPDM RUBBER INSULATIVE GRADE 50 BLACK				NR 55. BS1154:2003 Y3 WHITE				POLYURETHANE 50 BLACK			
EPDM/SBR 80 BLACK				NR 60 (Z60)				POLYURETHANE 50 WASHED OUT BLUE			
FLUOROSILICONE AND FLUOROELASTOMERS				NR 60 (YELLOW)				POLYURETHANE 75 GREY			
				NR 70 (ARE 1070)				POLYURETHANE 95			
FLUOROSILICONE LS63				NR 70 F/Q WHITE				POLYURETHANE 95 BLACK.			
FLUOROSILICONE AMS R 25988 GRADE 70 BLUE/RED				NR 70 GREY HIGH TEAR/WEAR NERO				POLYURETHANE -70 GREEN BR/FP/04/08/034			
FLUOROSILICONE 40 BLACK				NR 70. BS 1154. (Z 70)				POLYURETHANE 70 SAND STONE YELLOW			
FLUOROSILICONE RUBBER GRD 50 GREEN				NR 70 +/-3IRHD				POLYURETHANE 75 BLACK			
FLUOROSILICONE RUBBER TO AMS-R-25988 CLASS 1 GRADE 60 TYPE 2 COLOUR BLUE				NATURAL RUBBER (Z 70) BLACK.				POLYURETHANE 95 BLUE			
FLUOROSILICONE RED				NATURAL RUBBER (NR 70) (NRQX 70) TO DEF STAN 93-30 BLACK				POLYURETHANE POLY U 95 PILLAR BOX RED			
FLUOROSILICONE (LS63) BLUE				NATURAL RUBBER (NRQX 40) TO DEF STAN 93-30 BLACK 36/45 HQ				POLYURETHANE 60 (BLUE)			
FLUOROSILICONE 60, BLACK				NATURAL RUBBER (NRQX 70) TO DEF STAN 93-30 BLACK IRHD 66-75				POLYURETHANE 70 (GREEN)			
FLUOROSILICONE 60 BLUE				NATURAL RUBBER 60 RED. S.G. IS 1.38				POLYURETHANE 85, BLACK			
FLUOROSILICONE RED (LS63 RIO)				NATURAL RUBBER 60 WHITE. S.G. IS 1.42				POLYURETHANE GRD 70/75 BLACK.			
FLUOROSILICONE R 25988 B GRADE 70 (AMS-R-25988) BLUE				NATURAL RUBBER BS1154 Z60 IRHD 56-65 BLACK				POLYURETHANE NOM HARDNESS 55 SHORE D BLACK (VERY HIGH HARDNESS)			
FLUOROSILICONE RUBBER, GRADE 80. BLUE				NATURAL RUBBER TO DEF STAN 93-30 EQUIVALENT GRADE QX 40 BLUE				POLYURETHANE RUBBER 90.			
FLUORO-SILICONE 80, WHITE. S.G. IS 1.7				NATURAL RUBBER Z40 TO BS 1154 IRHD 36-45 BLACK				POLYU 70 GREY MOSS			
FLUOROSILICONE 60, BLACK. S.G. IS 1.45				NATURAL RUBBER Z90 TO BS1154:2003				POLY-U 70 RED			
FLUROSILICONE LS 2860 VAROX TRANS				NR 75.				POLY-U 83 GREY			
FLUOROSILICONE 40 SHORE, BLACK, HEAT TEMPERED TO 250 DEG				NR 80. (Z 80)				POLY-U 95 GREY			
FLUOROSILICONE GRADE 80 BLUE				NR 85				POLY-U 70 BLUE			
FLUOROSILICONE (FSE7560-D1) EQUIVALENT TO LS63U				NR 90 (STYRENE RESIN) EQUIVALENT TO BR15				POLY-U 90.			
				HSN401 GUM STOCK NATURAL RUBBER BLACK				PU 60 BLACK			
				NAT/NEO 50-60				PU 70 GREEN			
				Z50 (NR50)							

EPICHLOROHYDRIN RUBBER (HYDRIN)			
EPICHLOROHYDRIN 45/55 SHORE			
EPICHLOROHYDRIN 60 CONDUCTIVE			
EPICHLOROHYDRIN 60 SHORE			
EPICHLOROHYDRIN 55/65 GREY			
HYDRIN RUBBER 70/75			
HYDRIN RUBBER 85/95			
NITRILE RUBBER (NBR)			
NITRILE 40/45 SHORE (GREY FOOD QUALITY)			
NITRILE 60 SHORE (WHITE FOOD QUALITY) NON-STAINING			
NITRILE BS2751 BA40 36-45 IRHD			
NITRILE BA60 (NBR60) BS 2751			
NITRILE (BS2751) BA80 76-85 IRHD			
NITRILE 40/45 RED			
NITRILE 65/75 BRIGHT RED			
NITRILE 70 IRHD (LIGHT-GREY)			
NITRILE DTD 5595A (GRD-70)			
NITRILE RUBBER (BS2751 BA60) 56-65 HARDNESS			
NITRILE RUBBER (BS2751 BA70) 66-75 HARDNESS			
NITRILE PSLC/6 GRADE.D			
NITRILE 70 Shore A			
NBR 40/45 RED			
NBR 40/45 (GREY F/Q)			
NBR 50/55 94 A			
NBR 55 DTD 5509/D			
NBR 55/65 F.Q.WHITE			
NBR 60 DTD 5594 GR 60			
NBR 60 DTD 5595 A			
NBR 60 (FQ) WHITE			
NBR 70 (BA70) BS 2751:2001 (BA)			
NBR 70 BLACK (FQ)			
NBR 70 DTD 5594A GRADE 70			
NBR 75/85 PEROXIDE CURE			
NBR 80			
NBR 80/90 (5595A)			
NBR 90 (BA 90) NITRILE			
NBR 90 DTD 5594A GRADE 90			
NBR/HNBR 60 (GOOD TEAR)			
NBR/PVC 45 (BLUE)			
NBR/PVC 60 (BLUE)			
LOW NITRILE (LOW NBR) 60 BLACK			
LOW NITRILE (LOW NBR) 70			

PCR RUBBER			
PCR 55 SHORE YELLOW NEO			
PCR 60/70 IRHD BLACK			
PCR 75/80 IRHD			
PCR 78/83 (CONDUCTIVE)			
PCR GOOD FLEX 80 SHORE			
PCR 80 SHORE (CONDUCTIVE)			
PCR 70 BLACK (+GRAPHITE)			
PCR BS2752:2003 C80 BLACK			
SILICONE RUBBER (MOULDING GRADES)			
SILICONE 60 BLUE PLATINUM CURED			
GREEN SILICONE GRADE 60			
SILICONE RUBBER LT50-02 (DCBP, BLACK)			
SILICONE PINK GRADE 50			
SILICONE GRADE 60 BLUE, BR/SL/WS.60.1.BL2			
SILICONE TRANSLUCENT			
SILICONE RUBBER MOULDING COMPOUND GRD.50 (FOOD-QUALITY)			
SILICONE BLUE MOULDING COMPOUND 10 HARD			
SILICONE 30/35 BLUE			
SILICONE 35 TRANSLUCENT			
SILICONE 35/40 BLACK			
SILICONE 40 HIGH TEAR, BLUE			
SILICONE 40 HT RED			
SILICONE 40 RED OXIDE			
SILICONE 40 RED RIO			
SILICONE 40 TRANSPARENT			
SILICONE 50 BLACK HIGH			
SILICONE 50 DTD 5531A. GRADE 50 (WHITE)			
SILICONE 50 H.S GREY FR			
SILICONE 50 TRANSLUCENT			
SILICONE 50 TRANSPARENT			
SILICONE 50 WHITE (DTD 5531)			
SILICONE 50 WHITE FODD QUALITY)			
SILICONE 50/55 WHITE TRANSLUCENT			
SILICONE 50/60 PLATINUM-CURE, RED IRON OXIDE			
SILICONE 50/60 RIO RED			
SILICONE 60 PLATINUM-CURE (BLUE)			
SILICONE 60 HIGH TEAR (BLACK)			
SILICONE 60 HIGH TEAR (LIGHT GREY)			
SILICONE 60 PLATINUM CURE RED			
SILICONE 60 RED RIO			
SILICONE 60 RIO. (DTD 5582 A)			
SILICONE 60 TRANSLUCENT HIGH TEAR			
SILICONE 60 WHITE (DTD 5531 A) GRD 60			
SILICONE 60 YELLOW (HIGH-TEAR)			
SILICONE 70 BLUE DTD 5582			
SILICONE 70 DRAB OLIVE GREEN			
SILICONE 70 DTD 5531 WHITE			
SILICONE 70 DTD 5531 WHITE			
SILICONE 70 RED IRON OXIDE DTD 5582A			
SILICONE 70 TRANS TRANSLUCENT			
SILICONE 80 HIGH TEAR BLACK			
SILICONE 80 TRANSPARENT			
SILICONE 85 SHORE (BLACK NON-MARKING)			
SILICONE (DTD 5531 A) GRD 70			
SILICONE (DTD 5582 A) GRD 60			
SILICONE GRADE 20 RED			
SILICONE GRADE 50 RIO BR/SI/WS.50.1.RIO			
SILICONE GRADE 60 DRAK GREY FIRE RETARDANT BR/SI/009			
SILICONE GREY 50			
SILICONE HIGH TEAR 60 (RED IRON OXIDE) DTD 5615 A			
SILICONE RIO 70			
SILICONE RUBBER 10 IRHD WHITE			
SILICONE RUBBER 20 IRHD BLACK			
SILICONE RUBBER 20 IRHD RED OXIDE (HIGH TEMPERATURE)			
SILICONE RUBBER GP GRADE 50 BLACK (BR 15)			
SILICONE RUBBER HIGH TEAR, TRANS GRADE 60			
SILICONE RUBBER OIL RESISTANT DTD 5582 A GRADE 60 BLACK			
SILICONE RUBBER PLATINUM CURED GRD 60 BLUE			
SILICONE RUBBER, PLATINUM CURE GRADE 40 YELLOW			
SILICONE CLEAR 40			
SILICONE WHITE TO DTD 5531A GRD 70			
WHITE SILICONE 10-20 SHORE A			

SBR RUBBER (STYRENE BUTADIENE RUBBER)			
SBR 70 BLACK			
SBR RUBBER GRADE 60 BLACK			
SBR/BR 70 ROLLER			
FKM, VITON® AND FLUOROCARBON RUBBERS			
FKM GRADE E (DTD 5543 A) 71-80 SHORE			
FKM 50. (DTD 5612 A) GRADE 50 SHORE			
FKM 50/55 (BRIGHT-RED) HEAT-STABILISED RUBBER			
FKM 60 GREEN FLUOROCARBON			
FKM 60. DTD 5543B GRADE 60			
FKM 60. DTD 5612A GRADE 60			
FKM 70. DTD 5543B GRADE 70			
FKM 75. AMS-R-83248C			
FKM 75. DTD 5543A GRADE E			
FKM 75. DTD 5612A GRADE 70 MILL-R-83248C (AMS-R-83248C)			
FKM 85 IRHD (BRIGHT-RED)			
FKM 90 FLUOROCARBON RUBBER			
FKM GRADE 80 FLUOROCARBON RUBBER			
FKM GLT GRADE			
FLOUREL/FLUOROCARBON 80 GREY			
FLUOROCARBON RUBBER AMS-R-83485, GRADE 70 - 80, BLACK			
FLUOROCARBON RUBBER, GRADE 60, COLOUR GREEN			
VITON 50 (DTD 5612 A)			
VITON 50 RED			
VITON 55/65 GREEN			
VITON 65/70 GREEN			
VITON 70 BLUE			
VITON 70 BROWN			
VITON B 60			
VITON B GRADE70			
VITON DTD 5543B 60 HARD			
VITON DTD 5612 A 50 HARD			
VITON DTD 5612A GRADE 80			
VITON E60C - 60/65 BLACK			
VITON GF 60			
VITON GF 70 BLACK			
VITON GF 70/75			
VITON GF 90			
VITON GF 90 BLACK			
VITON GLT 70			
VITON RUBBER TYPE GLT			
ALL VITONS® IN THE LIST ABOVE ARE THE TRADE NAME OF DUPONT)			



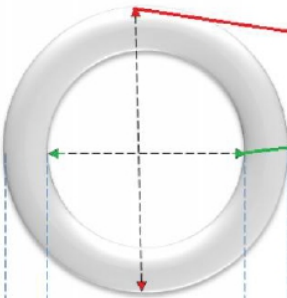
There are a lot of specification grades conforming to British Standards, American Military Specifications, Defence Standards, commercial and other custom made grades. William Johnston & Company Limited are happy to assist you in selecting the correct grade of elastomer to suit your application and budget. Chemical compatability of elastomers as well as temperature and pressure considerations should be adressed when specifying a long term seal. Please contact our technical team for assistance.

William Johnston & Company Limited offer a conversion and fabrication service. We have multiple machines that rapidly assist us in the precise conversion of material to gasket for almost every engineering sector.

Offering standard pipe flange gaskets in sizes pertinent to British Standards both imperial and metric we use

Tables D	PN 6	ASA 150	JIS 5K
E	10	300	10K
F	16	600	16K
H	25	900	20K
J	40	1500	30K

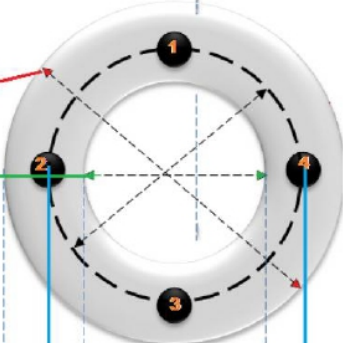
IBC (INNER BOLT CIRCLE)
RING TYPE GASKET



Thickness

THE NUMBER OF HOLES ON THE PITCH CIRCLE AND
THEIR DIAMETER

FULL FACE GASKET



Thickness

PCD - PITCH CIRCLE DIAMETER
MEASURED AS THE DISTANCE
FROM THE CENTRE OF ONE
BOLT HOLE TO THE CENTRE OF
THE BOLT HOLE OPPOSITE
THROUGH THE IMAGINARY
CENTRE POINT OF THE GASKET



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NON-STANDARD

Non-standard gaskets can be manufactured using a sample, template, dimensional drawing or file compatible with our CAD system. .dxf is by far the most common.

LARGE DIAMETER

We can manufacture large diameter gaskets using our CAD system that allow finished products to be larger than the sheet from which they were cut.

TOLERANCES

Tolerances on the finished product depend on thickness and type of material, hardness of the elastomer being cut etc. Our dedicated technical team will be happy to assist you in the design, manufacture and ongoing cost reduction methods if required.

STRIP

We offer an inhouse conversion from sheet to specific width (strip) for most elastomers. Please speak to our Commercial Manager who will advise you the most cost effective method of production.

SELF-ADHESIVE BACKING

Various self-adhesive backings can be factory applied dependent on the gaskets intended usage. If you are uncertain please contact our technical team for assistance.

CUSTOM GRADES OF RUBBER

If no suitable elastomer exists from our current range then we can create custom elastomers based on your application parameters. Minimum production runs are required and depend on the type of rubber, thickness and colouring required.

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