

# TD Rubber Sealing

## Material Data Sheet

To complement our range of cork and rubber materials we have a comprehensive portfolio of rubber cords and sheets at your disposal, which enables us to offer press-cut, molded and extruded products.

The most common polymer in T&D is nitrile (NBR) because of its excellent oil-resisting characteristics, but others such as hydrogenated nitrile (HNBR) and Viton\* are extensively used.

As with silicone cork for low-temperature applications, we have fluorosilicone rubber (FVMQ) with a temperature range of -60°C to +170°C and good oil resistance.

## Material Description & Properties

### RUBBER SEALING PORTFOLIO\*

KEY REQUIREMENTS	TDR 001 NITRILE BS2751 (NBR)	TDR 002 HYDROGENATED NITRILE (HNBR)	TDR 003 FLUOROSILICONE (FVMQ)	TDR 004 VITON** FLUOROELASTOMER
COLOUR	BLACK	BLACK	BLUE	BLACK
HARDNESS (SHORE A)	70 +/- 5°	80 +/- 5°	70 +/- 5°	70 +/- 5°
SPECIFIC GRAVITY (g/cm <sup>3</sup> )	1.20 – 1.25	1.19 NOMINAL	1.48 NOMINAL	1.84 NOMINAL
TENSILE STRENGTH (MPa)	12.5 MIN	26 NOMINAL	7.2 MIN	7 MIN
ELONGATION AT BREAK (%)	250 MIN	270 NOMINAL	290 NOMINAL	200 NOMINAL
COMPRESSION SET (%)	20 MAX (24 HOURS @ 70°C)	30 NOMINAL (72 HOURS @ 150°C)	25 MAX (22 HOURS @ 175°C)	55 NOMINAL (22 HOURS @ 175°C)
AIR AGED	168 HOURS @ 70°C	72 HOURS @ 150°C	-	70 HOURS @ 150°C
HARDNESS CHANGE (SHORE A)	-0 +10	+3 NOMINAL	-	-0 +10
TENSILE CHANGE (%)	-10 MAX	+6 NOMINAL	-	- 20 MAX
ELONGATION AT BREAK CHANGE (%)	-35 MAX	-33 NOMINAL	-	-45 MAX
TEMPERATURE RANGE (°C)	-30 TO +120	-30 TO +150	-60 TO +170	-20 TO +210
POSITIVE CHARACTERISTICS	RESISTANCE TO MINERAL OILS, HYDROCARBON FUELS, WATER AND A WIDE RANGE OF CHEMICALS.	WILL WITHSTAND THERMAL OXIDATION WELL. PARTICULARLY GOOD IN HOT WATER AND STEAM APPLICATIONS.	GOOD ELECTRICAL INSULATION PROPERTIES. EXCELLENT RESISTANCE TO ANIMAL AND VEGETABLE OILS AND OZONE.	EXCELLENT RESISTANCE TO MINERAL OILS, FUELS, WATER AND MOST CHEMICALS EXCEPT KETONE SOLVENTS. GOOD FLAME RESISTANCE AND VERY LOW GAS PERMEABILITY.
FORMAT	CORD	CORD	SHEETS	CORD AND SHEETS

\* Available in cords and sheets \*\* Dupont Trademark

STANDARD DIMENSIONAL TOLERANCES

**RUBBER CORD**

0.16% ON LENGTHS	> 4m
6.99mm, 8mm & 10mm DIA.	+/- 0.40mm
16mm DIA.	+/- 0.50mm

**RUBBER SHEETS**

THICKNESS (mm)	LENGTH	WIDTH (mm)	THICKNESS (mm)	STANDARD ROLL LENGTH (mm)
1	+/- 10%	+/- 25	+/- 0.25	10
1.5	+/- 10%	+/- 25	+/- 0.25	10
2	+/- 10%	+/- 25	+/- 0.25	10
2.5	+/- 10%	+/- 25	+/- 0.25	10
3	+/- 10%	+/- 25	+/- 0.25	10
5	+/- 10%	+/- 25	+/- 0.25	10
6	+/- 10%	+/- 25	+/- 0.25	10
8	+/- 10%	+/- 25	+/- 0.25	5
10	+/- 10%	+/- 25	+/- 0.25	5
12	+/- 10%	+/- 25	+/- 0.25	5
15	+/- 10%	+/- 25	+/- 0.25	5
20	+/- 10%	+/- 25	+/- 0.25	5
25	+/- 10%	+/- 25	+/- 0.25	5

These tolerances will apply to all products supplied. If alternative tolerances are required then these must be stated in writing at the time of order and may be subject to additional charges.