

MATERIAL DESCRIPTION & PROPERTIES



WILLIAM JOHNSTON
& COMPANY LIMITED

BS 2F66 (1982)

CERTIFICATIONS & APPROVALS

NP4464 - Cork/Rubber materials for tightness joints used in gas appliances, valves, devices and a gas installation.

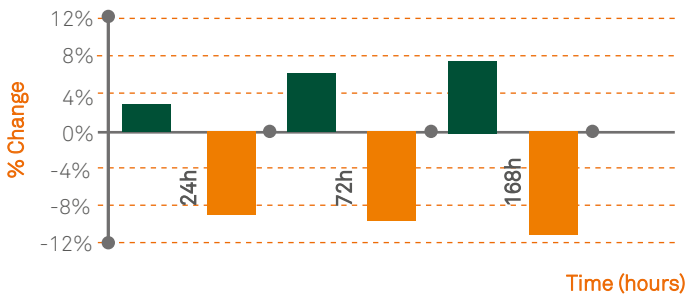
DIN 3535-5 (DVGW Certificate N° NG-5121BQ0521) - Rubber/Cork and rubber/cork synthetic fibre based gasket materials for use with gas valves, gas appliances and gas pipe work.

EN 30.1.1, part 6.1.1.2 - Domestic Cooking Appliances Burning Gas, Durability of Sealing Materials.

TS1028 sealing material is a medium loading cork rubber used for natural Gas and LPG applications.

- **TEMPERATURE RANGE** Up to 125°C (Up to 257°F)
- **STRESS RANGE** 4.5 to 20 MPa (652 to 2900 psi)
- **COMPRESSIVE STRENGTH** exceeds 70 MPa (10000 psi)

WEIGHT CHANGE^(1&2)



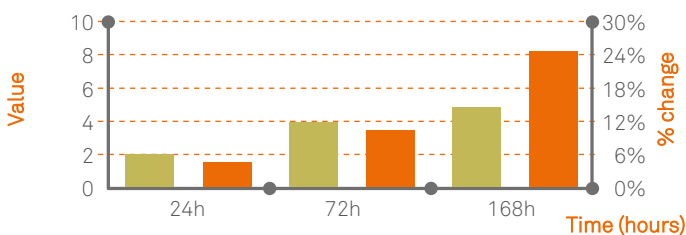
■ IRM902 (%)
■ n-PENTANE (%)

(¹) ISO 1817 in IRM902 @80°C
(²) ISO 1817 in n-PENTANE @23°C after drying 168h @ 40°C

TS1028 conforms to all present regulations for hazardous substances.

- Asbestos Free
- Heavy Metals (Pb, Cd, Hg and Cr (VI)) Free
- Polycyclic Aromatic Hydrocarbons (PAH) Free

HEAT AGEING DATA @ 100°C^(3&4)



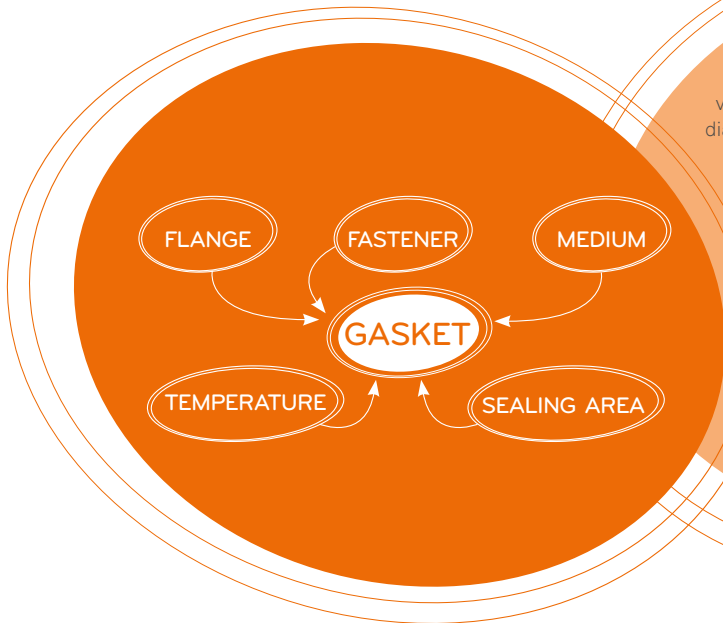
(³) ISO 48
(⁴) ISO 37
■ Hardness Change (Points IRHD)
■ Tensile Change (%)

DENSITY (kg/m ³) ¹	750
HARDNESS (SHORE A) ²	65
TENSILE STRENGTH (MPa) ³	1.5
ELONGATION (%) ³	40

(1) ASTM D297
(2) ISO 48
(3) ISO 37 (equivalent ASTM D412, Die C)

FLUID CONTACT

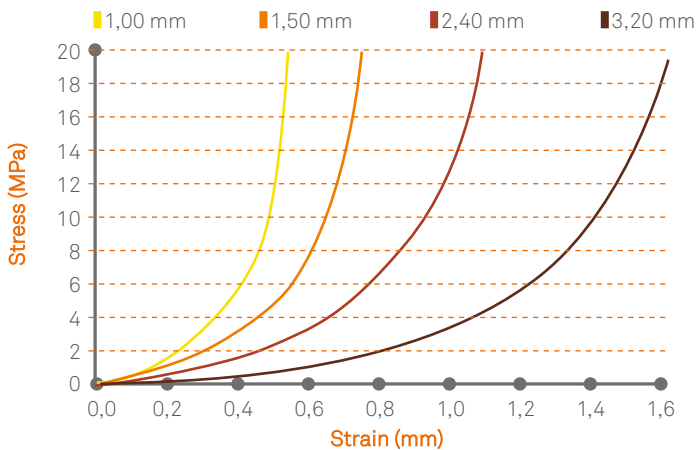
NATURAL GAS	SUITABLE
LIQUID PETROLEUM GAS	SUITABLE



Gasket Design Guidelines

A Gasket material suitability is defined by a variety of application factors shown in the adjacent diagram. The common perception that temperature and chemical resistance must be assured are only part of the equation. Amorim Cork Composites systems approach ensures joint integrity by considering the multiple variables that are involved.

Sealing Stress and System Distortion are key characteristics that influence each other. Sealing Stress is defined by the total fastener loading for a given gasket contact area. System Distortion is a function of the hardware manufacturing process and assembly procedure or loading. The selection of the gasket thickness depends on these two factors.

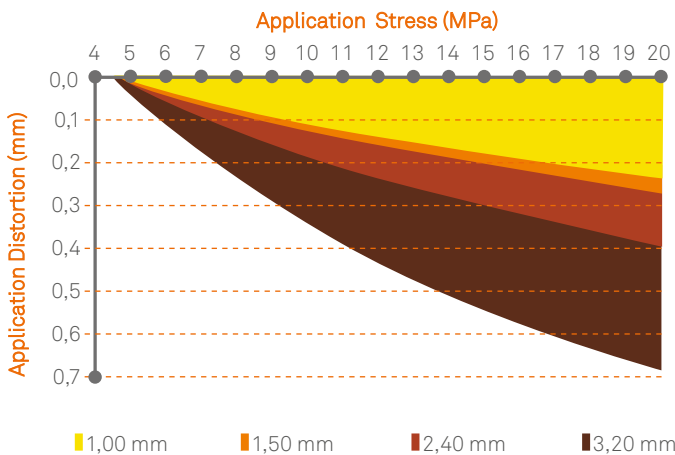


Sealing Stress

A Load Deflection (LD) curve is a Stress (MPa) vs. Strain (mm) curve. It is the load required to compress a material at a defined thickness a determined deflection.

It is very useful when making material selections to meet engineering requirements such as flange load or controlled compression applications.

If you require LD data at a different thickness, just ask us.



System Distortion

Conformability is the ability of a gasket material to conform to flange surface roughness and out-of-flatness.

At a given sealing stress a corresponding maximum allowable flange distortion assures that a "positive seal" is guaranteed for a defined material thickness.

Intersecting the hardware distortion and the respective sealing stress, a suggested material thickness is selected. However it is always recommended to validate the material thickness in your system due to unexpected flange distortion behavior.



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.