

### MATERIAL DESCRIPTION & PROPERTIES

**TS1028** sealing material is a medium loading cork rubber used for natural Gas & 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)

**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

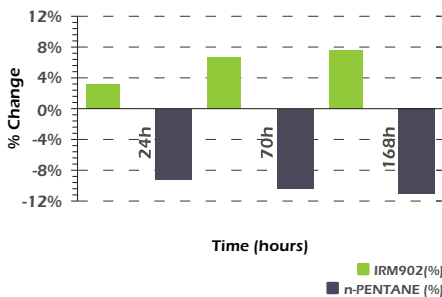
#### CERTIFICATIONS & APPROVALS

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

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

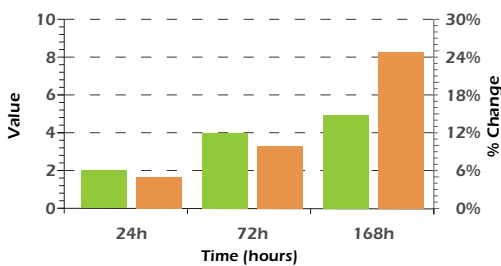
**EN 30.1.1, part 6.1.1.2** - Domestic Cooking Appliances Burning Gas, Durability of Sealing Materials

#### WEIGHT CHANGE <sup>(1&2)</sup>



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

#### HEAT AGEING DATA @ 100°C <sup>(3&4)</sup>



(3) ISO 48  
(4) ISO 37

Density (kg/m <sup>3</sup> ) <sup>1</sup>	750
Hardness (Shore A) <sup>2</sup>	65
Tensile Strength (MPa) <sup>3</sup>	1,5
Elongation (%) <sup>3</sup>	40

(1) ASTM D297

(2) ISO 48

(3) ISO 37 (equivalent ASTM D412, Die C)

#### Fluid Contact

Natural Gas

Suitable

Liquid Petroleum Gas

Suitable

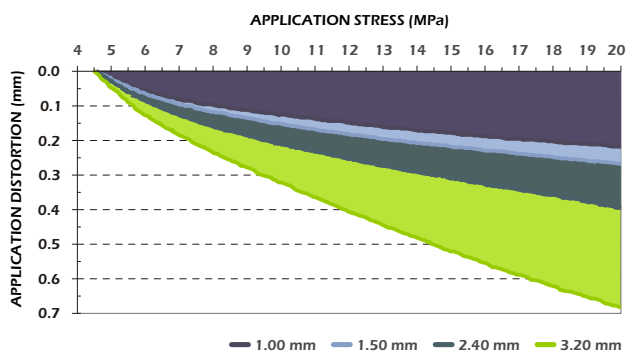
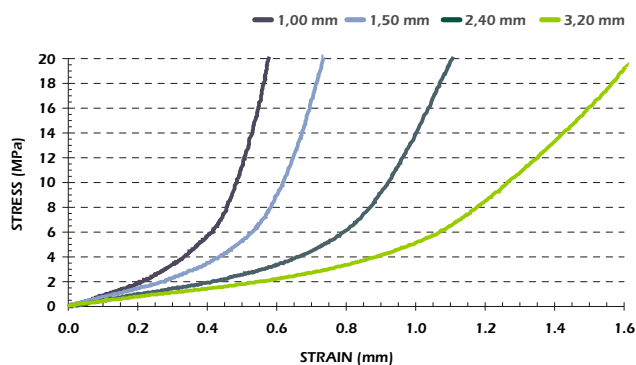
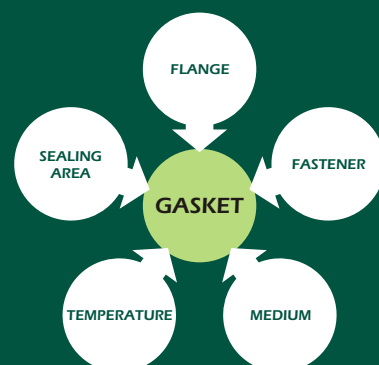
RoHS Compliant  
AMORIM CORK COMPOSITES



# 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.

**Check our “Q-Tool” sealing software on our website for a quick and comprehensive calculation of your joint system, or contact us for additional help to define our best material solution for your sealing requirement.**

The data provided in this brochure represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper sealing product may result in either hardware or assembly damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect, special, incidental, consequential, or punitive damages as a result of using the information listed in this brochure, any of its material specification sheets, its products or any future use or re-use of them by any person or entity.