

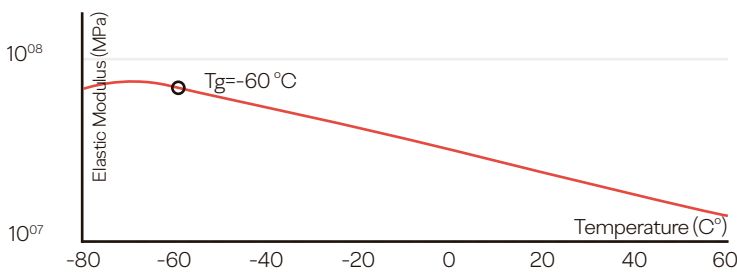
# AMORIM T&D

## TD7000

Technical Datasheet

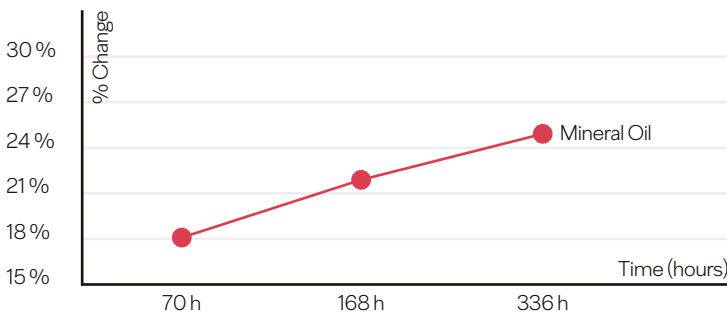
### Material Description & Properties

#### Glass transition temperature - T<sub>g</sub> (1)



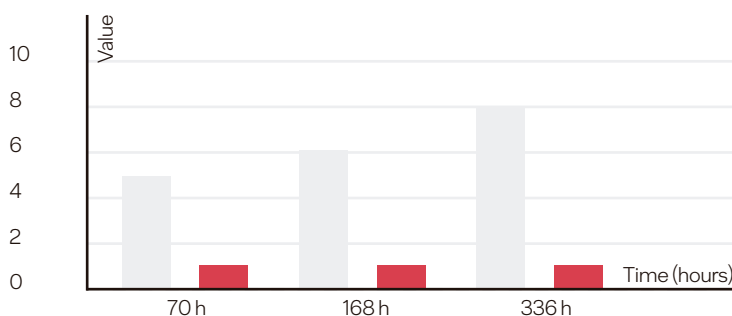
(1) ASTM E1640

#### Volume change @ 125 °C (2)



(2) ASTM F146

#### Heat aging data, air @ 150 °C (3&4)



(3) ASTM D2240

(4) ASTM F147

■ Hardness Change (Shore A)

■ Flexibility

**TD 7000** sealing material is compounded with Silicone (VMQ) rubber. This product is recommended for most transformer oils with an outstanding resistance to extreme temperatures.

Temperature range	-60 °C to 175 °C (-76 °F to 347 °F)
Stress range	2.6 to 12 MPa (377 to 1740 psi)
Compressive strength	exceeds 70 MPa (10000 psi)

**TD 7000** conforms to all current regulations for hazardous substances.

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

Density (kg /m <sup>3</sup> ) <sup>1</sup>	1100*
Hardness (shore A) <sup>2</sup>	65-80
Tensile strength (MPa) <sup>3</sup>	>1.72

(1) ASTM F1315

(2) ASTM D2240

(3) ASTM F152

\* typical value

#### Fluid contact

Mineral oil	suitable
Natural ester oil	suitable
Silicone oil	not recommended
SF6 GAS	not recommended

## According to

**ASTM D3455**-Test Methods for Compatibility of Construction Materials with Electrical Insulating Oil of Petroleum origin.

**ASTM D5282**-Test Methods for Compatibility of Construction Materials with Silicone Fluid used for Electrical Insulation.

## Gasket Design Guideline

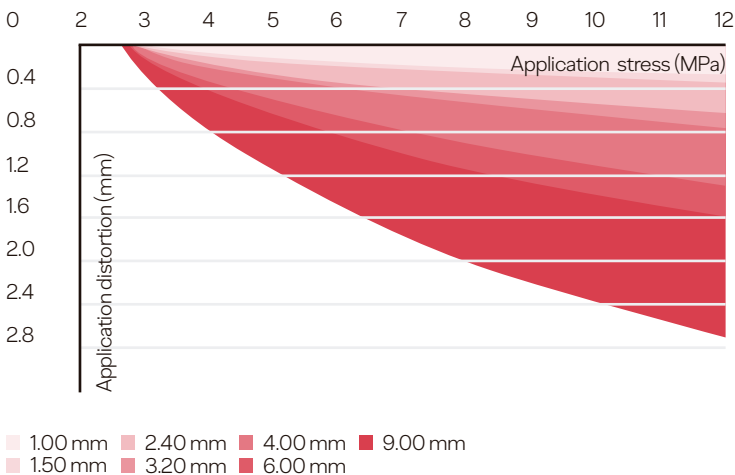
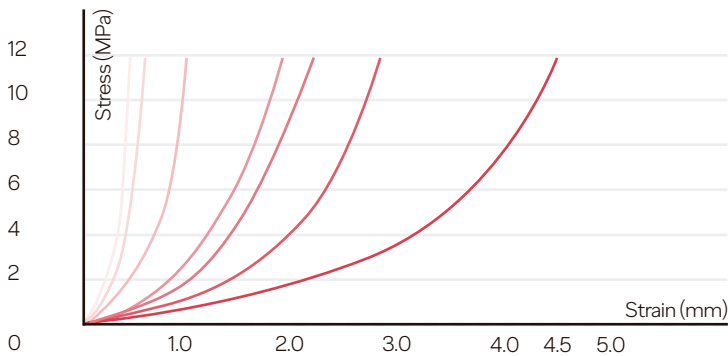
Temperature

Medium

Fastener

Flange

Sealing Area



Consult the "Q-tool" sealing software 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 Material Data Sheet 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 product damage or personal injury. Please contact Amorim Cork Composites regarding recommendations for specific applications. 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 material data sheet, any of its brochures, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).

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## Design Guidelines

A Gasket material compatibility is defined by a variety of application factors shown in the adjacent list. 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 load 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 for 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 thicknesses, 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.

By 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.