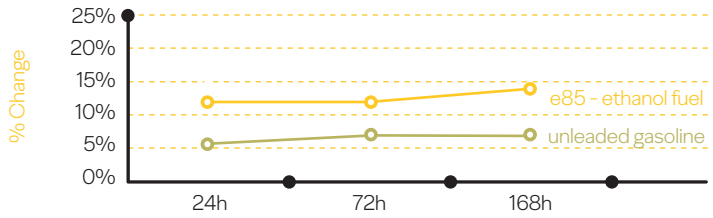
AMORIM TECH SEAL

TS 7110

Technical Datasheet

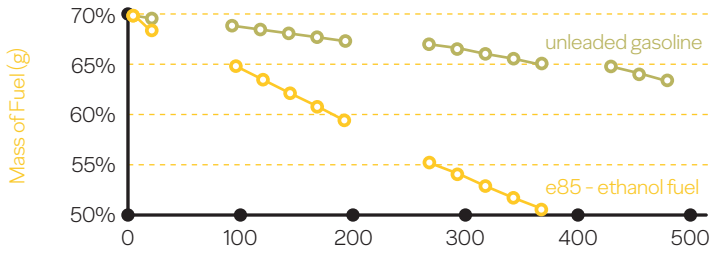
Material Description & Properties

Volume change @ 21°C (1)



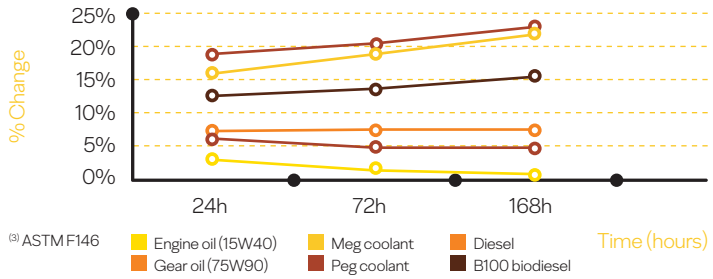
(1) ASTM F146

Fuel permeability comparisson @ 40°C (2)



(2) ASTM D814

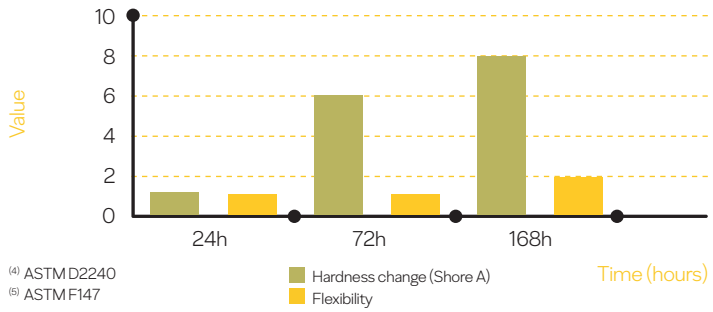
Volume change @ 100°C (2)



(3) ASTM F146

Engine oil (15W40) · Meg coolant · Diesel
Gear oil (75W90) · Peg coolant · B100 biodiesel

Heat ageing data, air @ 125°C (3&4)



(4) ASTM D2240
(5) ASTM F147

TS 7110 sealing material is compounded with Epichlorohydrin (ECO) rubber. This product has an outstanding performance for gasoline resistance but it also suited for most engine fluids and application.

Temperature range	-35°C to 135°C (-31°F to 275°F)
Stress range	4 to 20 MPa (580 to 2900 psi)
Compressive strength	exceeds 70 MPa (10000 psi)

TS 7110 conforms to all present regulations for hazardous substances.

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

Density (kg /m³)[1]	1100*
Hardness (shore A)[2]	70-85
Tensile strength (MPa)[3]	4,5*
Compressibility at 400 psi (%)[4]	15-30

(1) ASTM F1315
(2) ASTM D2240
(3) ASTM F152
(4) ASTM F36
* Typical value

Fluid contact

Unleaded gasoline	Suitable
E-85	Suitable
B-100	Suitable
Diesel (Low sulfur)	Suitable
Engine oil (15W40)	Suitable
Gear oil (75W90)	Suitable
Meg coolant	Suitable
Peg coolant	Suitable

Design Guidelines

A Gasket material compatibility 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.

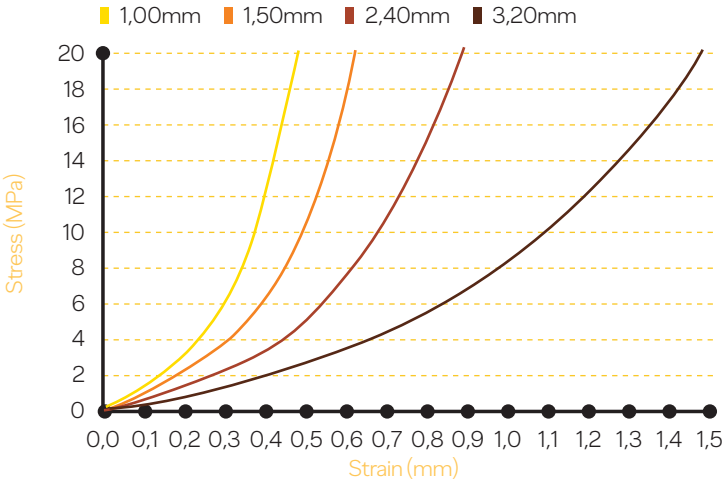
Amorim Cork Composites' systems approach ensures joint integrity by considering the multiple variables that are involved.

Sealing Stress and System Distortion are key characteristics

that influence each other. Sealing Stress is defined by the total fastener 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.

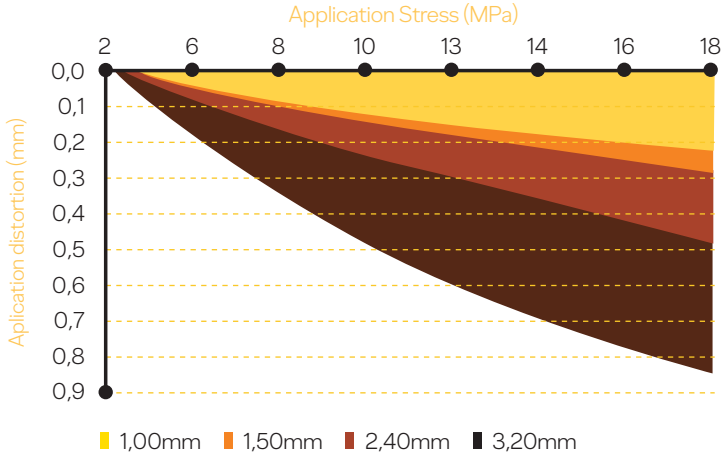


Sealing stress

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 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 ata 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.

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 Solutions regarding recommendations for specific applications. Amorim Cork Solutions expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Solutions 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).