



# TEFTEK® ENCAPSULATED TANK LID SEALS





# TEFTEK<sup>®</sup> ULTRASEAL FOR MANLID COVERS

**BEST SEALING FOR IT'S PURPOSE  
IN THE INDUSTRY**

Pelican's Teftek<sup>®</sup> encapsulated tank lid seal is an advanced fluoroplastic encapsulation with a premium core, producing a superior ring, with unparalleled durability and resilience.

This advanced material, combined with a premium core, forms the foundation of a superior sealing ring that excels in maintaining airtight integrity even in the most challenging and harsh environments.

Teftek<sup>®</sup> is transparent and has better mechanical properties in comparison to PTFE, is resistant to virtually all chemicals and has far superior tensile strength, abrasion and creep resistance than PTFE, FEP or PFA. Teftek<sup>®</sup> is reliable and fits 98% of all tank containers manlids.

## SERVICE CAPABILITIES

Pressure	Gas-tight up to 6 bar (72 psi)
Temperature	-60°C to +160°C (-76°F to +320°F)
Media	Teftek <sup>®</sup> is inert to almost all chemicals, with the exception of some alkali metals (molten or in solution) and by some rare fluorinated compounds at high temperatures and pressures

# ENCAPSULATION OPTIONS

Teftek® is typically provided in a standard square section, but we understand the distinct needs of different industries and applications. Therefore, Teftek® is also available in alternative configurations such as round and ‘D’ rectangular sections. Bespoke sizing is available, no matter the size, nothing is too big or small.

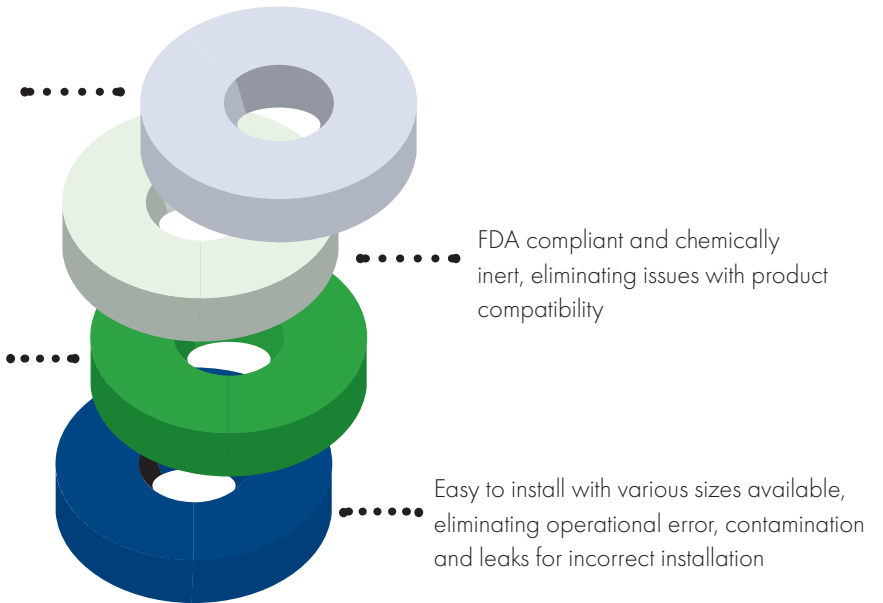
Order Part Number	Description
GM-TT-14x12-300	Manlid Gasket – TEFTEK – 14mm x 12mm Ø292mm
GM-TT-14x12-500	Manlid Gasket – TEFTEK – 14mm x 12mm Ø488mm

## BENEFITS AND FEATURES

Engineered with meticulous attention to detail, Pelican’s Teftek® ensures reliable performance, durability and offers a cost-effective choice, making it the ideal option for applications where repeated sealing is paramount. Whether faced with extreme temperatures, corrosive substances, or demanding industrial conditions, the Teftek® can rise to the occasion, providing steadfast protection and preventing the ingress of unwanted elements. But don’t just take our word for it, large operators and chemical plants are already using the Teftek® gasket, decreasing their waste output.

Endless and seamless encapsulation with superior performance material grades of the Teftek® encapsulation and Silicone core

Square, round and rectangular cross-sections for universal fit providing a standard solution for all applications



# PRODUCT DATA

Teftek® is the optimum choice when choosing sealing solutions for demanding applications.

Property	Test Method	Units	Teftek®
Encapsulation Max Service Temperature	8,000 hour aging tests	°C /°F	160/320
Encapsulation Tear Strength	ASTM D 1004 (initial)	N/kg	5.000/0.600
Encapsulation Tensile Strength	ASTM D 638 @23°C /75°F	PSI/bar/mpa	5500-7000/455/45.5
Encapsulation Impact Strength	ASTM D 256 @23°C /75°F	J/m²	No Break
Encapsulation Hardness	ASTM D 2240	shore	70
Encapsulation	ASTM D 792	g/cm³	1.7
Encapsulation % Elongation @ Break	ASTM D 638 @24°C /75°F	%	305
Encapsulation Flex Modulus	ASTM D 790	PSI/bar/mpa	150,000/10.34/1.034
Moisture Absorption	Vul046a	°C /°F	500/932
	Visual	-	Smoked/Clear

## FDA FOOD CONTACT COMPLIANCE

Teftek® is FDA compliant, meeting the requirements of 21 CFR 177.1500 for repeated food contact use, up to 120°C (248°F). The temperature range of the Teftek® is -60°C to +160°C (-76°F to +320°F). The lower temperature limit of -60°C (-76°F) is determined by the Silicone core. Teftek® will only start showing signs of low temperature embrittlement at -100°C (-148°F).

## CHEMICAL COMPATIBILITY

Teftek® encapsulated manlid seals have near universal chemical resistance, with the exception of some alkali metals (molten or in solution), Fluorine and by some rare fluorinated compounds and complex halogen compounds at high temperatures and pressures.







## HYDROLYTIC STABILITY AND WATER ABSORPTION



Hydrolytic stability is indicated by lack of deterioration in physical properties after long periods of exposure to boiling water. Therefore using room temperature tensile strength and elongation as control properties, Teftek® is essentially unaffected after 3,000 hours exposure to boiling water.

## WEATHER RESISTANCE



Teftek® has exceptional resistance to outdoor weathering, standing out for its durability and reliability in environmental elements. When subjected to long-term outdoor exposure, this advanced material consistently demonstrates remarkable resilience, showcasing minimal detrimental effects over time.

## QUALITY STANDARDS



The Teftek® tank lid seal not only meets but exceeds industry standards, offering a level of quality and reliability that our customers can trust. Pelican's dedication to excellence extends beyond the product itself, encompassing the entire manufacturing process. Rigorous testing procedures and quality control measures guarantee that each seal leaving our facilities upholds the highest standards, ensuring peace of mind for our customers.

**Please note:** Pelican recommends tightening swingbolts to 70-80 Nm for optimal sealing with our Teftek® encapsulated manlid seals, achieving a 6 bar sealing capability. Achievable pressure sealing depends on factors like manlid make/model, condition, centring, torque, and tightening procedure.

Please contact us for further details on any specific application.



## CYCLIC TEST

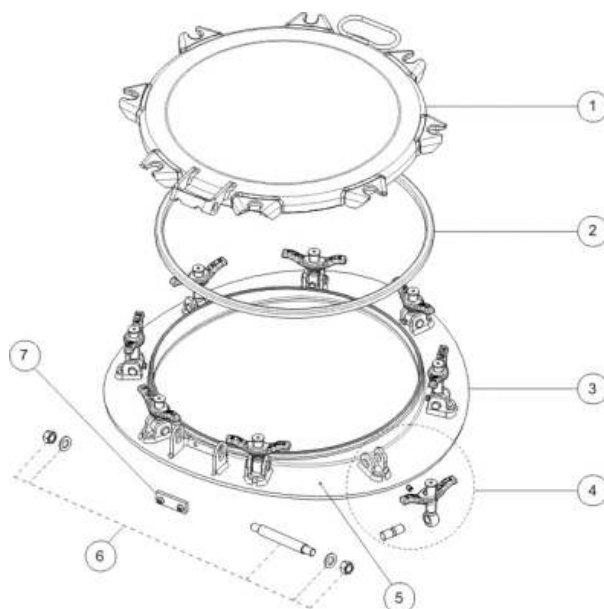
Teftek®'s superiority goes beyond its encapsulation capabilities, it is able to withstand over 5 cycles of application.

An inspection of the ring was conducted every 5 cycles and the test stopped after 25 cycles or when leakage was found. The tank lid is tightened to a torque of 80 lbft, 30 lbft more than the maximum specified on the tank lids. Teftek® failed after 13 cycles at 80 lbft torque, whereas FEP and PFA cycles were less than half of that.

## APPLICATIONS

Teftek® is designed for sealing:

- Tank Lids
- Main hatches
- Butterworth hatches
- Inspection hatches on board chemical and product tankers
- Manlids on tank containers
- Road tankers
- Rail tank cars carrying heated cargoes, such as molten bitumen/asphalt or sulphur; typical products that are transported at elevated temperatures to prevent solidification.



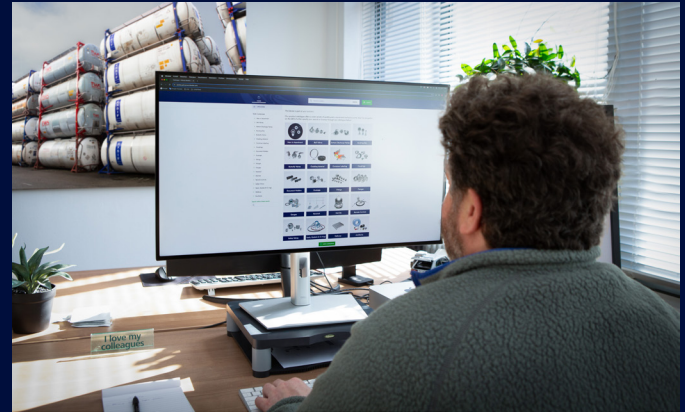




## **WE OFFER COST EFFECTIVE OPTIONS**

CREATING SUSTAINABLE SOLUTIONS FOR FUTURE GENERATIONS HAS NEVER BEEN MORE IMPORTANT. THE TEFTEK® GASKET CAN BE SAFELY RE-USED SEVERAL TIMES WITH- IN AN APPLICATION, WITHOUT DIMINISHING THE QUALITY. PELICAN WORLDWIDE PROVIDES COST EFFECTIVE SOLUTIONS FOR BOTH OUR CUSTOMERS AND THE PLANET

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## PELICAN PORTAL FOR PARTS

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**Order Management**

**Technical Parameters**

**Associated Parts**

**Print to PDF**

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**Order History**

## GLOBALLY CERTIFIED

- TÜV Germany (international certificates)
- Lloyds Register (international certificates)
- RDW Holland (international certificates)
- Bureau Veritas (national certificates)
- Turkish Standards (Turkey certificate)

- ISO9001
- ISO14001
- ISO45001

Design Codes & Approvals;

- ASME VIII Div.1, RID/ADR, IMDG, EN14433,
- EN14432, EN14025



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