

# Glass-Fused-to-Steel Vegetable Oil Storage

## Product Description

BIOTANQ® is a registered Trade Name of Permastore Limited internationally recognised as the world's leading sectional bolted Glass-Fused-to-Steel tank & silo manufacturer, the modular design and build concept provides flexibility for rapid construction, ease of transportation to site and the ability to re-model, extend, dismantle and relocate.

Glass-Fused-to-Steel is the fusion of two materials combining the strength and engineering flexibility of steel with the corrosion resistance of glass.

The high temperature fusion process takes place within the range of 650 °C - 870 °C and is applied to both sides of the tank sheet resulting in an inert and durable finish.

## Glass-Fused-to-Steel Inspection Data

Test	Specification	Minimum Inspection Frequency	Inspection Method
<b>Inside Surface Inspection</b>			
Inside surface – high voltage discontinuity test	Zero discontinuities	Every panel	EN 14430 - Test A
Inside surface - inspection of glass thickness	Maintained in the range from 200µm to 360µm	In accordance with ISO 2859 Part 1	EN ISO 2178
<b>Outside Surface Inspection</b>			
Outside surface - inspection of glass thickness	Maintained in the range from 150µm to 360µm	In accordance with ISO 2859 Part 1	EN ISO 2178
Outside surface - inspection of glass colour	Maximum allowable tolerances: L : ± 2, a : ± 3 & b : ± 4	In accordance with ISO 2859 Part 1	Calibrated colour comparator

## Glass-Fused-to-Steel - Chemical Resistance and Physical Properties – In Accordance with ISO 28765

Inside Surface Test	Test Standard	Quality Specification	Minimum Test Frequency
<b>Chemical Resistance</b>			
Citric acid at room temperature	EN 14483-1:2004 Clause 9	Class A	Monthly
Boiling citric acid	EN 14483-2:2004 Clause 10	Maximum weight loss 5g/m <sup>2</sup> after 2½ hours	Annually
Boiling distilled or demineralized water Liquid phase	EN 14483-2:2004 Clause 13	Maximum weight loss 5g/m <sup>2</sup> after 48 hours	Annually
Hot sodium hydroxide	EN 14483-4:2004 Clause 9	Maximum weight loss 7g/m <sup>2</sup> after 24 hours	Annually
<b>Physical Properties</b>			
Impact	ISO 4532, 20N force	Maximum cracking 2mm after 24 hours	Monthly
Adherence level	EN 10209: Annex D	Class 2	Monthly
Scratch hardness	EN 101	Mohs 5	Monthly

## Contact Sealant Immersion Testing and Technical Product Data

Test	Test Results	Test Method
<b>Immersion Resistance Testing</b>		
Immersion bead peel adhesion test with vegetable oil	Grade 1	DIN 54457
<b>Technical Product Data</b>		
Shore A-hardness	45 approx.	ISO 868
Tensile strength	1.1 N/mm <sup>2</sup> approx.	ISO 37
Elongation	750% approx	ISO 37

## Ancillary Contact Items Immersion Testing Data

Material / Finish	Tested in Accordance with Standard
EPDM gasket material	90/128/EEC incorporated in 2002/72/EC
Polypropylene material	90/128/EEC incorporated in 2002/72/EC
Hot dip galvanised finish	EN71-3
Grade 316 stainless steel material	BS 678
Epoxy resin finish	LP Specification T1

## Further Information

For additional information on BIOTANQ® Glass-Fused-to-Steel products please visit our website:  
[www.biotanq.com](http://www.biotanq.com)

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