

APPROVAL CERTIFICATE

This is to certify, that the undernoted products have been approved in accordance with the relevant requirements of the DNV GL Approval System.

Certificate No.	11 579 - 14 HH
Company	FMI S.p.A. Via Taranto 10/12 25036 Palazzolo Sull' Oglio, ITALY
Product	Graphite based gasket sheet material
Type	Unigraph 500
Technical Data / Application	<p>Unigraph 500 is a graphite based gasket sheet material with polymer coating both sides.</p> <p>Appearance: black color, sheet size 1500 x 1500 mm</p> <p>Thickness: 0,5 up to 5 mm</p> <p>Density (ASTM F 1315): 0,9 – 1,1 [g/cm³]</p> <p>Compressibility (DIN 3535-6): 40 – 50 [%]</p> <p>Recovery (DIN 3535-6): 3 – 7 [%]</p> <p>Creep relaxation (DIN 3535-6): 5-10 [%]</p> <p>Gas Permeability/specific leakage (DIN 3535-6): less than 0,1 [mg s⁻¹ m⁻¹]</p> <p>NOTE 1: The specified data are for gaskets of 1.5 mm thickness.</p> <p>Temperature: max.+650 [°C] (inert or reducing media), max.+450 [°C] (oxidizing media) min. -200 [°C]</p> <p>Pressure: max. 100 [bar]</p> <p>NOTE 2: The recommended temperatures and pressures applicable for different thicknesses are to be according manufacturer's instructions.</p> <p>RANGE APPLICATION:</p> <p>The gaskets may be used under consideration of the mechanical and physical properties as well as the chemical resistance as follows:</p> <ul style="list-style-type: none"> - Ship's piping systems excluding cargo lines on Chemical and Gas Tankers carrying propylene oxide and mixtures of ethylene / propylene oxide. - Maximum allowable working pressure and temperature according to the specification of the manufacturer.
Approval Standard	DIN 3535-6, ASTM F1315, SOLAS 74 as amended – Chapter II-1-Reg.3.5.2 – asbestos free compliance.
Documents	<p>Inspection Certificate (EN 10204-3.2) no. 140005 dated 2014-09-12;</p> <p>FMI - Laboratory Test Reports no. 455, 456, 457, 467;</p> <p>Test Report no. 14LA02745 (MADE/HSE) dd. 2014-03-24 (asbestos-free);</p> <p>Test Report-BAM-ref.no.II-662/2008E, dd.2008-09-23 (reactivity with Oxygen);</p> <p>Initial Survey and Audit Report (GL Genoa) dd. 2014-10-06;</p> <p>Technical Data Sheet (FMI) - Unigraph 500 - (Sept. 2014);</p> <p>Declaration of asbestos-free content dd. 2014-06-12;</p> <p>EN ISO 9001:2008 cert. (TÜV Nord) no. 44100110614.</p>
Remarks	The selection of the gaskets for the corresponding application and the correct installation are to be in accordance with the instructions of the manufacturer.
Valid until	2019-10-21
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File No.	XI.B.03
	Hamburg, 2014-10-22