



# PLANIGRAPH V48Z OXYGEN BAM

## Composition

Pure flexible graphite

## Characteristics

Planigraph V48Z OXYGEN graphite gaskets in rings ensure safe and reliable performance in environments with liquid and gaseous oxygen. Certified according to BAM specifications, they provide effective protection against oxidation. When used in stems, assistance from GR80SGR OXYGEN braided wiper rings (BAM report 2-28/2015E) or Planigraph V48ZN OXYGEN nickel-reinforced graphite rings (BAM report 2-1948/2014E) is recommended.

## Applications

Made with highly pure graphite, Planigraph V48Z OXYGEN expanded graphite gaskets in rings offer high quality and reliability for applications involving liquid and gaseous oxygen.

## Tech Data

Maximum Temperature C°	Maximum Oxygen Pressure bar
up to 60	420
> 60 to 280	250

- Never use the product at its maximum rated temperature and pressure. Consult the manufacturer for further information.
- The peak temperature can be sustained only for short exposure periods.
- The dimensional tolerances of the molded products refer to the Carrara S.p.A. standard, unless otherwise agreed.



## Planigraph V48Z OXYGEN BAM

Planigraph V48Z OXYGEN graphite gaskets in rings are BAM certified for use with both liquid and gaseous oxygen. These expanded graphite rings are designed for services involving liquid and gaseous oxygen (BAM report 2-1949/2014 E), serving for stem or as fire-safe seals for closures and as packing for ball valve seats.

Report		BAM
on Testing a Nonmetallic Material for Reactivity with Oxygen		Bundesanstalt für Materialforschung und -prüfung
Reference Number	2-1949/2014 E	TEST REPORT
Copy	1. Copy of 2 Copies	
Customer	CARRARA S.p.A. Via Provinciale 1/E 25030 Adro (BS) Italia	
Order Date	August 4, 2014	
Reference	Order No: 1411295	
Receipt of Order	August 11, 2014	
Test Samples	Die-formed flexible graphite ring Planigraph ZV48Z OXY, undisclosed batch, for use as a sealing material in piping, valves and fittings or other components for gaseous oxygen service at temperatures up to 280 °C and for liquid oxygen service. BAM Order No.: 2-192-220	
Receipt of Samples	August 7, 2014	
Test Date	August 22, 2014 to February 6, 2015	
Test Location	BAM - Working Group "Safe Handling of Oxygen", building no. 41, room no. 073 and no. 120	
Test Procedure or Requirement According to	DIN EN 1707:2002-02 "Cryogenic Vessels - Gas/Material Compatibility" ISO 21012:2004-07 "Cryogenic Vessels - Gas/Material Compatibility" Annex of pamphlet M 034-1 (BGI 617-1) List of nonmetallic materials compatible with oxygen by BAM Federal Institute for Material Research and Testing", by Sachverständigenrat, Rohstoffe und Chemische Industrie, Edition: March 2014. TROS 407 Technical Rules for Hazardous Substances "Arbeiten mit Gasen - Gefährdungsbeurteilung" chapter 3 "Informationserhebung und Gefährdungsbeurteilung" and chapter 4 "Stützmaßnahmen bei Tätigkeiten mit Gasen" Edition: June 2013	
<small>All pressures of this report are excess pressures. This test report consists of page 1 to 5 and annex 1 to 4. This test report and the attached test certificates issued in accordance with the conditions of use are the property of BAM. For any reproduction of this certificate or the publication of any extracts, the test results are available in the test certificate. In case of a further version of the test reports available, exclusively the German version is binding.</small>		
<small>M Safety in technology and chemistry</small>		



The information provided in this publication, as well as that supplied to users in other forms, is based on our experience and communicated according to the best knowledge available. However, since numerous factors beyond our knowledge and control may influence the use of the products, no warranty, explicit or implicit, is given regarding such content. The operating limits indicated do not constitute confirmation that these values can be applied simultaneously. Avoid using the product at the maximum temperature and pressure limits. The maximum temperature is sustainable only for short periods under specific conditions. Specifications may be changed without notice. The images in the DS may not exactly represent the product, its color and/or marking.

**CARRARA**  
GLOBAL SEALING SOLUTIONS

**Carrara S.p.A.**,  
Via Provinciale 1/E - 25030 Adro - BS - Italia  
tel. +39 030 7451121 [carrara.it](http://carrara.it) - [info@carrara.it](mailto:info@carrara.it)