



# 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<br>Materialforschung<br>und -prüfung |
| Reference Number   | 2-1949/2014 E  | TEST REPORT  |
| Copy   | 1. Copy of 2 Copies  |  |
| Customer   | CARRARA S.p.A.<br>Via Provinciale 1/E<br>25030 Adro (BS)<br>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.<br>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<br>"Cryogenic Vessels - Gas/Material Compatibility"<br>ISO 21012:2004-07<br>"Cryogenic Vessels - Gas/Material Compatibility"<br>Annex of pamphlet M 034-1 (BGI 617-1)<br>"List of nonmetallic materials compatible with oxygen by BAM"<br>Federal Institute for Material Research and Testing", by<br>Berlinsprachenrat, Robotics and Chemicals Institute,<br>Edition: March 2014.<br>TROS 407 Technical Rules for Hazardous Substances<br>"Arbeitsregeln mit Gasen - Gefährdungsbeurteilung"<br>chapter 3 "Informationsvermittlung und<br>Gefährdungsbeurteilung" and<br>chapter 4 "Stützmaßnahmen bei Tätigkeiten mit Gasen"<br>Edition: June 2013 |  |
| <small>All pressures of this report are excess pressures.<br/>This test report consists of page 1 to 5 and annex 1 to 4.<br/>This test report and the attached test certificates are available in electronic form only. The test results are available in the test report.<br/>In case of a further version of the test report available, exclusively the German version is valid.</small> |  |  |
| <small>M Safety in technology and chemistry</small>  |  |  |



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**CARRARA**  
GLOBAL SEALING SOLUTIONS

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