



# GRAPHITE RING ZV48Z OXY BAM APPROVED

## Composition

Pure flexible graphite

## Characteristics

ZV48Z OXY 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 ZGR80SGR OXY braided wiper rings (BAM report 2-28/2015E) or ZV48ZN OXY nickel-reinforced graphite rings (BAM report 2-1948/2014E) is recommended.

## Applications

Made with highly pure graphite, ZV48Z OXY expanded graphite 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 to the maximum temperature and pressure associated. Consult the manufacturer for further information
- The peak temperature can be sustained for short exposures
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**Report**  
on Testing a Nonmetallic Material for Reactivity with Oxygen

**Reference Number** 2-1949/2014 E  
**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 Valvograph 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.: 2-1952/220  
**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 1797:2002-02  
"Cryogenic Vessels - Gas/Material Compatibility"  
ISO 21010:2004-07  
"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 Berufsgenossenschaft Rohstoffe und chemische Industrie, Edition: March 2014.  
TRGS 407 Technical Rules for Hazardous Substances "Teilgebiet mit Gasen - Gefährdungsbeurteilung" chapter 3 "Informationsermittlung und Gefährdungsbeurteilung" and chapter 4 "Schutzmaßnahmen bei Tätigkeiten mit Gasen" Edition: June 2013

EST REPORT

## Graphite ring ZV48Z OXY BAM approved

ZV48Z OXY graphite 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.



The information in this publication and otherwise provided to users is based on experience and is provided to the best of our current knowledge. Due to many factors which are beyond our knowledge and control affecting the use of the products, no warranties are given or are to be held implied with respect to such information. The operating limits shown in this publication do not constitute a statement that these values can be applied simultaneously. Do not use the product at the associated maximum temperature and pressure values. The maximum temperature can be sustained for short exposures in particular conditions. Specifications are subject to change without notice.



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