

TECHNICAL DATA SHEET - CST 0420/03 - 11/08/2014

## ZV48Z OXY

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

Maximum combined temperature and pressure with pure oxygen

**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)  
Italy

**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.: 2-1952/200

**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 "Tätigkeiten mit Gasen - Gefährdungsbeurteilung" chapter 3 "Informationsermittlung und Gefährdungsbeurteilung" and chapter 4 "Schutzmaßnahmen bei Tätigkeiten mit Gasen" Edition: June 2015


All pressures of this report are excess pressures.  
This test report consists of page 1 to 6 and annex 1 to 4.  
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H: Safety in technology and chemistry



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Materialforschung  
und -prüfung

TEST REPORT



### Composition

The die-formed graphite rings **ZV48Z OXY** are manufactured with pure flexible graphite.

### Features

The die-formed graphite rings **ZV48Z OXY** are suitable for Oxygen Service (BAM report 2-1949/2014 E) as graphite sealing for valve stems and seats, but also for all application which requires graphite sealing.

The product can be assisted by wiper rings style **ZGR80SGR OXY** (BAM Report 2-28/2015E) or by reinforced die-formed graphite rings **ZV48ZN OXY** (BAM Report 2-1948/2014E).