

TECHNICAL DATA SHEET - CST 0420/04 - 11/08/2014

ZV48ZN OXY

Maximum Temperature [°C]	Maximum Oxygen Pressure [bar]
up to 60	430
> 60 to 280	250

Maximum combined temperature and pressure with pure oxygen

Report
on Testing a Nonmetallic Material for Reactivity with Oxygen

BAM
Bundesanstalt für
Materialforschung
und -prüfung

Reference Number 2-1948/2014 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.: 1411296

Receipt of Order August 11, 2014

Test Samples Die-formed flexible graphite ring Valvingraph ZV48ZN 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.: 2-1932-219

Receipt of Samples August 7, 2014

Test Date August 22, 2014 to January 30, 2015

Test Location BAM - Working Group "Safe Handling of Oxygen", building no. 41, room no. 073 and no. 120

Test Procedure or Requirements 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 Sonderforschungsbereich Fluor- und chemische Industrie, Edition: March 2014.

According to TRGS 407 "Technical Rules for Hazardous Substances - Tätigkeiten mit Gasen - Gefährdungsbeurteilung" chapter 3 "Informationsmittlung und Gefährdungsbeurteilung" and chapter 4 "Schutzmaßnahmen bei Tätigkeiten mit Gasen" Edition: June 2013

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

TEST REPORT

Composition

The die-formed graphite rings **ZV48ZN OXY** are manufactured with pure flexible graphite supported by Nickel tape.

Features

The die-formed graphite rings **ZV48ZN OXY** are suitable for Oxygen Service (BAM report 2-1948/2014E) as graphite sealing for valve stems and seats, but also for all applications which require graphite sealing. The product can be assisted by wiper rings style **ZGR80SGR OXY** (BAM Report 2-28/2015E) or by the graphite rings style **ZV48Z OXY** (BAM Report 2-1949/2014E).