

## 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                           |

Temperatura e pressione massime associate con ossigeno puro

| Report   |   | <br>Bundesanstalt für<br>Materialforschung<br>und -prüfung |
|--|---|---|
| on Testing a Nonmetallic Material for Reactivity with Oxygen   |   |   |
| Reference Number   | 2-1948/2014 E   | <b>TEST REPORT</b>  |
| 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.: 1411296  |   |
| Receipt of Order   | August 11, 2014   |   |
| Test Samples   | Die-formed flexible graphite ring Valvograph 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.<br>BAM Order No. 2-1952/219   |   |
| 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. 100  |   |
| Test Procedure or Requirement According to   | DIN EN 1797:2002-02<br>"Cryogenic Vessels - Gas/Material Compatibility"<br>ISO 21010:2004-07<br>"List of nonmetallic materials compatible with oxygen by BAM"<br>Annex of pamphlet M (24-1) (BGI 617-1)<br>"List of nonmetallic materials compatible with oxygen" by Bundesanstalt für Materialforschung und -prüfung, Edition: March 2014.<br>TRGS 407 "Technical Rules for Hazardous Substances"<br>"Tätigkeiten mit Gasen - Gefährdungsbeurteilung"<br>chapter 3 "Informationsbestimmung und Gefährdungsbeurteilung" and chapter 4 "Schutzmaßnahmen 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 6 and annex 1 to 4.<br/>This test report may only be published in full and without any alteration. A formalized permission to reprint may be obtained from BAM for any approved reproduction of its content in the publication of any journal. The technical staff is authorized to verify the report.<br/>In case a German version of the test report is available, exclusively the German version is binding.</small> |   |   |
| <small>H Safety in technology and chemistry</small>  |   |   |

### Composizione

Gli anelli in grafite **ZV48ZN OXY** sono realizzati con grafite espansa pura supportata da nastro di Nickel.

### Caratteristiche

Gli anelli in grafite **ZV48ZN OXY** sono destinati all'impiego con ossigeno liquido e gassoso (BAM report 2-1948/2014E) come tenuta per lo stelo e per i seggi delle valvole a sfera. Il prodotto può essere utilizzato insieme agli anelli di treccia **ZGR80SGR OXY** (BAM Report 2-28/2015E) e agli anelli **ZV48Z OXY** (BAM Report 2-1949/2014E).