

TECHNICAL DATA SHEET - CST 2515/04 - 05/08/2014

CONTROLLER 2 EVOLUTION 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)
 Italien
 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 DIN EN 1797:2002-02
 „Cryogenic Vessels - Gas/Material Compatibility“
 ISO 21019:2004-07
 „Cryogenic Vessels - Gas/Material Compatibility“
 Annex of paragraph M 034-1 (BCI 617-1)
 According to "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
 "Trägerstoffe 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.
 This test report may only be published in full and certified any alterations. A separate certification is not valid for the
 material from BAM for any extended reproduction of its certificate or the publication of any records. The test results
 refer exclusively to the test samples.
 It is a German version of the test report is available, exclusively the German version is binding.

H Safety in technology and chemistry

TEST REPORT

Composition

Rings

- Flexible graphite rings ZV48Z OXY

Wiper rings

- Compression packing rings ZGR80SGR OXY

Features

Controller 2 Evolution Oxy is the stem packing made with material BAM approved for Oxygen Use. Equipped with the special packing GR80SGR OXY. Controller 2 Evolution OXY, completely lubricant free, offers a great recovery with a very high aging resistance.

Applications

Packing for Oxygen Service.