

IBExU Institut für Sicherheitstechnik GmbH, Fuchsmühlenweg 7, D-09599 Freiberg

ROSS EUROPA GmbH
Mr Dietrich Warmbier
Robert-Bosch-Straße 2
63225 Langen
Germany

Brand- und Explosionsschutz Störfallvorsorge

Telefon: +49 (0) 3731 3805- 57
Telefax: +49 (0) 3731 23650
Internet: <http://www.ibexu.de>
E-Mail: post@ibexu.de

Freiberg, 8 July 2011
Hä/Leh/Hüb 4282/11



Assessment of the HOZE-FUZE® with regard to the assignment to the scope of application of the Directive 94/9/EC

(Translation of the original German-language Assessment established by IBExU)

- **Your purchase order with no. 2011-35984 of 28 April 2011**
- **Our order handling no.: IB-11-7-051**
(In case of correspondence, please specify this number!)

Dear Mr Warmbier

After checking the submitted documents and inspection of a model of the HOZE-FUZE® D1969B5002 the following was ascertained under consideration of the requirements of the Directive 94/9/EC as well as the standards EN 1127-1:2007 and EN 13463-1:2009, and under the below-mentioned prerequisites:

1 Prerequisites

- The HOZE-FUZE® is used for stopping respectively reducing gas flows in pipes and particularly in hoses in the case of a broken hose or pipe.
- The gas flows to be stopped are air, gas mixtures with > 21 vol.-% oxygen up to pure oxygen or inert gases. Corrosive and flammable gases and vapours are explicitly excluded.
- The HOZE-FUZE® is used only with such gases which do not cause any dangerous chemical reactions with the construction materials of the HOZE-FUZE®.
- The housing of the HOZE-FUZE® is produced from stainless steel or coated aluminium alloy. The thickness of the colour coat is < 0.2 mm. The other parts of the HOZE-FUZE® are manufactured from materials according to the information in chapter 4.6. The adhesive used for the special design for increased oxygen content in the gas mixture (> 21 vol.-% to 100 vol.-%) represents an exception as described below.

- For gas mixtures with > 21 vol.-% oxygen up to pure oxygen only the special designs of stainless steel may be used. You have informed us with E-Mail of 7 July 2011 (chapter 4.7) that for the special designs pipe sealing cord TWINEFLON R12D06 is used instead of the adhesive and the materials according to the technical information in chapter 4.6. A test report of the BAM (chapter 4.8) describes the applicability of the pipe sealing cord in oxygen atmosphere. According to this test report the pipe sealing cord may be used in oxygen atmosphere with pressures to 30 bar (overpressure) and 100 °C.
- The assessed HOZE-FUZE® includes the sizes G ¼ to G 2 with maximum permissible inlet pressures of 18 bar (overpressure) for the sizes G ¼ to G ¾ and 35 bar (overpressure) for the sizes G 1 to G 2. At use with gas mixtures with > 21 vol.-% oxygen up to pure oxygen the maximum inlet pressure must not exceed 30 bar (overpressure) at the sizes G 1 to G 2.
- The operating and ambient temperature ranges for use of the HOZE-FUZE® are -40 °C to +100 °C.
- The technical data of the HOZE-FUZE®, such as inlet pressures and operating and ambient temperature ranges, are kept.
- The HOZE-FUZE® shall be installed in a way so that they are fixed spatially.
- The specifications and requirements of the operating instruction of the HOZE-FUZE® have to be observed.

2 Ascertainment

- The HOZE-FUZE® has potential ignition sources only inside caused by the mechanically effective, self-acting valve. Potential ignition sources do not have to be considered and assessed further because there are no flammable gases or vapours in the inside in the operation with the specified design data.
- The valve in the HOZE-FUZE® goes into action only in rare cases. Therefore, an effective warming of the housing of the HOZE-FUZE® caused by mechanical effects inside is not expected. By the selection of suitable construction and installation materials for the HOZE-FUZE® for the intended use with gas mixtures with > 21 vol.-% oxygen up to pure oxygen an effective warming by chemical reactions with oxygen are not assumed.
Ignition sources in the form of hot surfaces have to be excluded so that the outer surrounding explosive atmosphere cannot be ignited.
- The maximum outer surface temperature of the HOZE-FUZE® is determined exclusively by the temperature of the medium inside and the ambient temperatures.
- Any danger of the formation of dangerous charging at the outer surface of the HOZE-FUZE® at cleaning works with dry cloths can also be excluded because of the low layer thicknesses.

3 Assessment

- The HOZE-FUZE® is a device which does not have any potential ignition sources in the operation with the specified design data. It is not an equipment or component in the meaning of the Directive 94/9/EC and therefore it is not subject to the scope of the directive either.

- The HOZE-FUZE® can be used without explosion protection marking without any restriction in potentially explosive areas.
- The permissible temperature class of the explosive atmosphere outside the HOZE-FUZE® is not determined by the HOZE-FUZE® but by the temperature of the medium (gases, vapours) inside and the surroundings of the HOZE-FUZE®.
- This assessment applies for the HOZE-FUZE® sizes with threads G ¼ to G 2 or corresponding threads as external thread and/or internal thread with the article identifications:

#1969 B #####

The first "#" stands for the design of the connections, the second "#" for the size 1 to 9 according to G ¼ to G 2, the last three "#" indicate special designs according to the model number key (clause 4.3).

4 Submitted documents

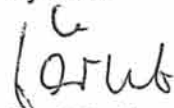
- 4.1 Druckschrift D580 - ROSS® HOZE-FUZE® of 01/2011
- 4.2 HOZE-FUZE® - User's instructions of 01/2011
- 4.3 Key to ROSS Model Numbers of 01.03.2001 JH
- 4.4 Aufbau HOZE-FUZE® of 29.04.2011
- 4.5 Item numbers HOZE-FUZE® of 29-4-2011/DW
- 4.6 HOZE-FUZE® in schematic representation, 2 sheets without further identification of 29-4-2011
- 4.7 E-mail of 07.07.2011 of ROSS EUROPA GmbH, Vertriebsbüro Mitte
- 4.8 Bericht über die Prüfung eines Dichtungsmaterials auf Reaktionsfähigkeit mit Sauerstoff, Aktenzeichen: II-2742/2004 vom 09.12.2004 (BAM)

Sincerely yours

IBExU

Institut für Sicherheitstechnik

By order



(Dr. Pärnt)
Manager



(Dipl.-Phys. Härtel)
Editor