



OBAC

Institute for Research and Certification Ltd.

44-122 Gliwice, ul. Jasna 31

(1) EC-TYPE-EXAMINATION CERTIFICATE

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, Directive 94/9/EC (Decree of Minister of Economy of Dec. 22, 2005, Official Journal No.263, Pod.2203)

(3) EC-Type – Examination Certificate Number: **OBAC 06 ATEX 100X**

(4) Equipment or protective system: **RSN 7...(M2) cap lamp**

(5) Manufacturer: **BARTEC VARNOST**

(6) Address: **SLO 1410 Zagorje ob. Savi, Cesta 9, augusta 59**

(7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The institute for Research and Certification „OBAC” Ltd., notified body No.1461 in accordance with Article 9 of the European Council Directive 94/9/EC of March 23, 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres give in Annex II to the Directive.

The examination and test results are recorded In the confidential report No. OBAC/06/ATEX/052.

(9) Compliance with the Essentials Heath and Safety Requirements has been assured by conformity with:

PN-EN 50014:2004 PN-EN 50020:2005 PN-EN 50033:2002
PN-EN 62013-1:2004 PN-EN 62013-2:2004

(10) If the sing „X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination certificate relates only to the design, evaluation and tests of the specified equipment or protective system according to the Directive 94/9/EC. The certificate does not apply to further requirements of the Directive relating to the manufacture and placing on the market of this equipment or protective system.

(12) The marking of the equipment or protective system must include the following:

 **I M2 EEx ib I**



**President of Board
of the Notified Body**

Zbigniew Tarnawski M.SC.

Gliwice, 20 February 2006



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(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE

No. OBAC 06 ATEX 100X

(15) Description of equipment or protective system:

The technical solution installed in the RSN 7...(M2) lamps enable them to be used in spaces belonging to "A" or "B" class of coal dust explosion hazard and in space "a", "b" or "c" degree of methane explosion hazard, with the methane concentration not over than 2%.

The lamp designation includes the following:

- RSN 7 abbreviation derived from the distributor's name: BARTEC VARNOST,
- S singular main light source,
- D computer – communication module,
- P positioning transmitter,

With the appearance of the "D" and "P" marks being dependent on the Client's requirements.

The RSN 7 cap lamp includes the battery box, battery cover, connecting cable and the reflector with its shell. Inside the box there are three rechargeable cells connected in series, each of 1,2V voltage. The batteries are produced in three accumulator-capacity versions, i.e. 4.5, 7.0 and 9.0 Ah. The complete lamps being manufactured in two versions: with or without the positioning transmitter (see the mark "P" in the lamp symbol).

In the upper part of the battery box there are the 500 mA fuse and the positioning transmitter. Inside the reflector shell there are the electronic system controlling the lamp operation, the switch for setting the mode of operation, and the LEDs of high luminous intensity. The electronic system makes it possible to switch on the main or reserve light source; using the switch located on one side of the reflector shell.

On the back side of the shell there are contacts enabling the lamp accumulators to be charged, the contacts being protected against the flow of inverse current by adequate diodes.

Rated data:

- | | |
|--------------------------|----------------------|
| - Rated voltage | 3.6 [V] |
| - Rated capacity | 4.5, 7.0 or 9.0 [Ah] |
| - Main light source | LED LUXEON |
| - Light source stability | 1 [W] |
| - Minimum Light emission | 100000 [h] |
| - Lamp mass | 800 – 1000 [g] |
| - Protection level | IP 54 |
| - Working temperature | -5 to +40°C |
| - Mark | EEx ib |



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(16) Report:

Report No. 775/2003 of Institutul National Pentru Securitate Miniera Si Protectie Antiexploziva – INSEMEX PETROSANI, of Nov. 18, 2003.

Report No. 110/2005 of Institutul National Pentru Securitate Miniera Si Protectie Antiexploziva – INSEMEX PETROSANI, of Oct. 14, 2005.

Report No. 006/06, LABOREx.

The RSN 7...(M2) cap lamp meets the requirements for explosion-proof equipment and may be used as the device of the equipment group I, equipment category M2.

(17) Special provisions of safe usage:

- The RSN 7... cap lamp may be used:
 - in spaces not endangered by methane explosions,
 - in spaces of “b” or “c” degree of methane explosion hazard, with the methane concentration not over than 2%,
 - in spaces belonging to “A” or “B” class of coal dust explosion hazard,
- The cap lamp accumulator can only be charged in non-explosive spaces.
- The ambient temperature shall be from -5 to +40°C.

(18) The compliance with the Essentials Health and Safety Requirements has been assured by compliance with standards shown in p. 9 of this certificate.

(19) List of the agreed documentation:

- Instruction Manual Cap Lamp RSN 7-8 (VS – 11 01 410).
- Catalogue sheet of MAKROLON 2607 polycarbonate.
- Catalogue sheet of MAKROLON 2407 polycarbonate.
- Catalogue sheet of KLM 2x1mm² cable.
- Data sheet of POLATOMIL M-2000.
- Data sheet of KATALIZATOR OL-1.



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