



Mining And Surface Certification CC

CC 2008/202081/23



Certificate Number: MASC M/11-294X
Issued: 10 August 2013
Expire: 10 August 2014
Page: 1 of 3

IA – CERTIFICATE (Revision 2 – Revised for Annual Review)

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT (INCORPORATION THE MINE HEALTH AND SAFETY ACT) AND REGULATION 9 (1) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

Ex – Type Examination

Certificate number:

MASC M/11-294X

Equipment:

TX6531 Cherub Personal Gas Monitor

Serial No:

(see “Conditions of Certification”)

Applicant:

Troxel Limited.

Address:

Hazel Grove
Stockport
Cheshire
SK7 5DY
United Kingdom

Manufacturer:

Troxel Limited.

Address:

Hazel Grove
Stockport
Cheshire
SK7 5DY
United Kingdom

DESCRIPTION:

The TX6531 Cherub Personal Gas Monitor is a portable hand held gas sensing instrument designed for continuous monitoring of gas concentrations, for example in sewers, underground piping or within tanks, and other personal monitoring applications.

The monitor comprises electronic components mounted on 4 printed circuit boards (PCB's), a liquid crystal display unit (LCD), an audible alarm, a tactile alarm for use in high ambient noise areas, 6 light emitting diodes (LEDs), a battery pack and up to 2 gas sensors all housed in a plastic enclosure held together by tamper resistant fixings. Mounted on the front of the enclosure is a push button to operate the instrument and to interrogate the measurements displayed on the LCD unit.

The battery pack is a Sony Fukushima Lithium-Polymer battery pack consisting of 2 type US383562 A7 sealed Lithium ion cells connected in parallel via a encapsulated protection circuit.

The TX6531 Cherub Personal Gas Monitor is NOT designed for use in oxygen levels above 21%.

Charging of the Lithium-Polymer battery pack is permitted only in a non-hazardous area and by a charger having a maximum output voltage of 6.0V. The permitted chargers are either a TX6538 or a TX6539 supplied by Troxel Limited.

/ . Marking...

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IA CERTIFICATE NUMBER: MASC M/11-294X
TX6531 Cherub Personal Gas Monitor
(Intrinsic Safety)
(Revision 2)

Page 2 of 3

MARKING:

The marking of the units are as follows:

Troxel Limited.

TX6531 Cherub Personal Gas Monitor

Ex Rating: Ex ia I + H2

IA No: MASC M/11-294X

Serial No: (See conditions of Certification)

COMPLIANCE:

The unit as described above and in MASC Letter **11-294** is hereby certified "Explosion Protected" Ex ia I + H2, and is suitable for use in hazardous locations as stated below and as tested, assessed and inspected in accordance with the relevant requirements of SANS Standards:

SANS 60079 "Electrical apparatus for explosive gas atmospheres"

- Part 0: 2005 (edition 3) "General requirements" and
- Part 11: 2007 (edition 3) "Equipment protection by intrinsic safety "I".

| | | |
|----------------------|---------------|---|
| Location | Zone 0, 1 | Gas/ Coal dust: Underground |
| Hazard Frequency | | Continuous as could occur under normal operating conditions in hazardous area |
| Environment | Group I+H2 | Methane, Hydrogen and Coal dust |
| Limiting Temperature | | 450°C (Methane gas) 150°C (Coal dust) |
| Ambient Temperature | -20°C to 40°C | |

The use of apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:

- i) SANS 10086 requirements;
- ii) Any conditions mentioned in the above report;
- iii) Codes of Practice enforced in terms of Regulations 21.17.2 of Minerals Act, by Chief Inspector of Mines;
- iv) Any restrictions and conditions enforced by Chief Inspectors of Mines, Principal Inspector (Group I equipment) of Chief Inspector of Factories (Group II equipment);
- v) Any relevant requirements of the MHS Act or the OHS Act.

SPECIAL CONDITIONS OF USE ("X") (According to the SIRA Certificate):

- Charging of the Sony Fukushima Lithium-polymer battery pack is permitted only in a non hazardous area and by a charger supplied by Troxel Limited.
- The TX6531 Cherub personal Gas Monitor **MUST NOT** be subjected to impacts or mechanical stress.

/ . Conditions...

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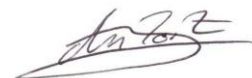
IA CERTIFICATE NUMBER: MASC M/11-294X
TX6531 Cherub Personal Gas Monitor
(Intrinsic Safety)
(Revision 2)

Page 3 of 3

CONDITIONS OF CERTIFICATION:

1. This Certificate remains valid based on an annual review indicated in an official MASC letter.
2. The apparatus must be additionally marked in a clear, legible, visible and indelible manner with the MASC marking details above.
3. This certificate of approval only covers the equipment as certified above and does not include any scheduled additions or variations/amendments/new issues to the certificate(s), made after the above date.
4. The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by Baseefa and in this approval.
5. The Baseefa certification must remain valid.
6. The bearing of the requirements in the ARP 0108 (or regulations) and SANS 10108 on the certification of the equipment must remain unchanged.
7. All production units must be covered by a QAN, Mark Scheme or Batch Evaluation.

Approved on behalf of MASC



F du Toit
TECHNICAL SPECIALIST

Mining And Surface Certification

This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.

While every endeavour is made to ensure that a test / assessment is representative and accurately performed, and that a report is accurate in the quoted results and conclusions drawn from the test / assessment, MASC or its members/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report issued pursuant to a test / assessment.

MASC takes no responsibility for any non-conformances, exclusions or any results / assessments not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and routine tests have been successfully completed and the product complies with the documentation and standard(s).

This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practises.

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