



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx TSA 09.0013X issue No.: 7

Status: **Current**

Date of Issue: **2014-06-13** Page 1 of 4

Applicant: **Mine Safety Appliances Company**
1000 Cranberry Woods Drive
Cranberry Township PA 16066-5207
United States of America

Certificate history:

Issue No. 7 (2014-6-13)
Issue No. 6 (2013-8-21)
Issue No. 5 (2011-8-26)
Issue No. 4 (2011-5-19)
Issue No. 3 (2011-3-16)
Issue No. 2 (2010-8-23)
Issue No. 1 (2009-12-17)
Issue No. 0 (2009-7-8)

Electrical Apparatus: **Altair 5 / 5X Diffusion/pumped Multi-gas Detector**
Optional accessory:

Type of Protection: **Intrinsic safety 'ia'**

Marking: MSA Altair 5
Ex d ia I IP54
Ex d ia IIC T4 IP54
MSA Altair 5X
Ex ia I IP65
Ex d ia IIC T4 IP65 (with Ex sensor installed)
or Ex ia IIC T4 IP65 (with Ex sensor not installed)
IECEX TSA 09.0013X
S/N: _____

Approved for issue on behalf of the IECEx
Certification Body:

Debbie Wouters

Position:

Acting Quality & Certification Manager

Signature:
(for printed version)

Date:

13 JUNE 2014

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





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Manufacturer: **Mine Safety Appliances Company**
1000 Cranberry Woods Drive
Cranberry Township PA 16066-5207
United States of America

Additional Manufacturing location
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2003 Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

AU/TSA/ExTR07.0035/00
AU/TSA/ExTR11.0018/00
AU/TSA/ExTR13.0043/00

AU/TSA/ExTR10.0043/00
AU/TSA/ExTR11.0045/00

AU/TSA/ExTR11.0009/00
AU/TSA/ExTR13.0039/00

Quality Assessment Report:

FR/INE/QAR08.0011/04



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Altair 5 Multi-gas Detector is a 5 Gas instrument. It contains one dual toxic electrochemical cell, one single toxic electrochemical cell, one combustible cell, and one oxygen electrochemical cell.
The Altair 5X Multi-gas Detector is a 5 Gas instrument. It contains one dual XCell toxic electrochemical cell, one single XCell toxic electrochemical cell, one XCell combustible cell, and one XCell oxygen electrochemical cell.
It measures 170 mm by 90 mm by 45 mm. The body is made of polycarbonate and the overmoulding is conductive, of the same material as the Altair 4 gas detector. The display may be mono or colour. The apparatus has options of gas sensing by diffusion or pump. The internal battery has available options of rechargeable or replaceable cells. The rechargeable battery is Lithium Ion – one cell. The alkaline battery is AA size alkaline cells – 3 cells (Duracell MN1500, Energizer E91).

CONDITIONS OF CERTIFICATION: YES as shown below:

Please refer to Annexe of the certificate.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Replaced LCD display from Sharp LQ022B8UD05 to All Shore Industries ASI-T-2201-DA0EN/D. Drawing 3098-1187 was updated accordingly. The new LCD drawings were added from 75 – 85. Others kept the same as previous revision 3. These changes were assessed in Test Report AU/TSA/ExTR13.0043/00.



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 09.0013X	Issue No.:	7
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Variations Permitted by Issue 7:

Replaced LCD display from Sharp LQ022B8UD05 to All Shore Industries ASI-T-2201-DA0EN/D. Drawing 3098-1187 was updated accordingly. The new LCD drawings were added from 75 – 85. Others kept the same as previous revision 3.

These changes were assessed in Test Report AU/TSA/ExTR13.0043/00.

Conditions of Certification pertaining to Issue 7 of this Certificate:

The conditions of certification are unchanged from the issue 0 of the certificate.

1. It is a condition of safe use that the rechargeable battery shall be charged in a safe area and charge voltage shall not exceed 6.7 V.
2. It is a condition of safe use that for alkaline models, the Duracell MN1500 and Energizer E91 AA size alkaline cells can be used in the apparatus.

Drawing list pertaining to Issue 7 of this Certificate:

Drawing/ Document No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
3098-1187	85	TestSafe Approvals, Altair5X / Altair5XIR	4	2014-04-21

Certificate issued by:

