



# 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](http://www.iecex.com)

Certificate No.: **IECEX TSA 09.0014X** issue No.:7  
Status: **Current**  
Date of Issue: **2014-06-13** Page 1 of 4

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 (2009-8-7)

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

Electrical Apparatus: **Altair 5 iR / 5X iR Multi-Gas Detector**  
Optional accessory:

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

Marking: **MSA Altair 5 iR  
Ex d ia I IP54  
Ex d ia IIC T4 IP54  
MSA Altair 5X iR  
Ex d ia I IP65  
Ex d ia IIC T4 IP65  
IECEX TSA 09.0014X  
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.

Certificate issued by:

**TestSafe Australia**  
919 Londonderry Road  
Londonderry NSW 2753  
Australia





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Manufacturer: **Mine Safety Appliances Co.**  
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:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2003</b> Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
<b>IEC 60079-11 : 2006</b> 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/ExTR09.0025/00  
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 iR Multi-gas Detector is a 6 Gas instrument. It contains one dual toxic electrochemical cell, one single toxic electrochemical cell, one catalytic bead combustible cell, one oxygen electrochemical cell, and an infrared sensor.

The Altair 5X iR Multi-gas Detector is a 6 Gas instrument. It contains one dual XCell toxic electrochemical cell, one single XCell toxic electrochemical cell, one XCell combustible cell, one XCell oxygen electrochemical cell, and an infrared sensor. One electrochemical sensor bay can be fitted either with a XCell electrochemical cell or a 20 mm electrochemical cell.

It measures 170 mm by 90 mm by 47 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 uses rechargeable Lithium Ion battery.

### 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

<b>Annexe for Certificate No.:</b>	<b>IECEX TSA 09.0014X</b>	<b>Issue No.:</b>	<b>7</b>
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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.

### Drawing list pertaining to Issue 7 of this Certificate:

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

Certificate issued by:

	<b>TestSafe Australia</b> 919 Londonderry Road Londonderry NSW 2753 Australia
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