



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEX Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEX BAS 15.0013</b>	Page 1 of 4	<b>Certificate history:</b> Issue 2 (2015-11-10) Issue 1 (2015-09-22) Issue 0 (2015-07-22)
Status:	<b>Current</b>	Issue No: 3	
Date of Issue:	<b>2019-10-02</b>		
Applicant:	<b>Gastech Australia</b> 24 Baretta Road Wangara WA 6065 Australia		
Equipment:	<b>D-Guard<sup>2</sup> Intrinsically Safe Smart Gas Detector</b>		
Optional accessory:			
Type of Protection:	<b>Intrinsic Safety</b>		
Marking:	<b>Ex ia I Ma (-20°C ≤ Ta ≤ +55°C)</b> <b>Ex ia IIB T4 Ga (-20°C ≤ Ta ≤ +55°C)</b> <b>Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +70°C)</b>	<b>All product versions</b> <b>Only 65-1080-LEL; -CH4; -CO2</b> <b>All except 65-1080-LEL; -CH4; -CO2</b>	

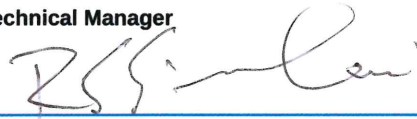
Approved for issue on behalf of the IECEX  
Certification Body:

**R S Sinclair**

Position:

**Technical Manager**

Signature:  
(for printed version)

  
2-10-19

Date:

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

**SGS Baseefa Limited**  
**Rockhead Business Park**  
**Staden Lane**  
**Buxton, Derbyshire, SK17 9RZ**  
**United Kingdom**





# IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 15.0013**

Page 2 of 4

Date of issue: 2019-10-02

Issue No: 3

Manufacturer: **Gastech Australia**  
24 Baretta Road  
Wangara  
WA 6065  
Australia

Additional  
manufacturing  
locations:

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 equipment 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 60079-0:2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

This Certificate **does not** indicate compliance with 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 Reports:

[GB/BAS/ExTR16.0393/00](#)

[GB/BAS/ExTR15.0315/00](#)

[GB/BAS/ExTR15.0033/00](#)

Quality Assessment Report:

[AU/TSA/QAR07.0005/08](#)



# IECEx Certificate of Conformity

Certificate No.: **IECEx BAS 15.0013**

Page 3 of 4

Date of issue: 2019-10-02

Issue No: 3

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The D-Guard<sup>2</sup> Intrinsically Safe Smart Gas Detector provides gas monitoring for Oxygen, flammable and toxic gasses.

The equipment comprises; a main circuit board mounted in the lid of the enclosure; an optional terminal board in the base of the enclosure; and a LCD mounted on the main circuit board, visible from the outside of the enclosure. Also mounted on the main circuit board is the gas sensor, which protrudes into the lid of the enclosure with a hydrophobic barrier to prevent water ingress, but allow gas air flow.

Electrical connections are either made directly to the main circuit board via P1, or to the terminal PCB in the base of the enclosure.

See Annex for Terminal Parameters and Model Type References.

**SPECIFIC CONDITIONS OF USE: NO**



# IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 15.0013**

Page 4 of 4

Date of issue: 2019-10-02

Issue No: 3

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

### Variation 3.1

To permit the use of a toughened glass window in place of the existing polycarbonate window; a minor modification to existing Main Detector Boards and subsequent permanent change to the Main Detector Board Artwork; and to extend the list of model type references.

ExTR: **GB/BAS/ExTR16.0393/00**

File Reference: **16/0830**

### Annex:

Annex to [IECEX BAS 15.0013 Annex - Issue 2.pdf](#)

Group I terminal parameters

Power	HART Connector
U <sub>i</sub> = 22V	U <sub>i</sub> = 28V
C <sub>i</sub> = 0	C <sub>i</sub> = 0
L <sub>i</sub> = 0	L <sub>i</sub> = 0
	U <sub>o</sub> = 22V
	I <sub>o</sub> = #
	P <sub>o</sub> = #

Group II terminal parameters

Power	HART Connector
U <sub>i</sub> = 28V	U <sub>i</sub> = 28V
I <sub>i</sub> = 93mA	I <sub>i</sub> = 93mA
P <sub>i</sub> = 0.7W	P <sub>i</sub> = 0.7W
C <sub>i</sub> = 0	C <sub>i</sub> = 0
L <sub>i</sub> = 0	L <sub>i</sub> = 0
	U <sub>o</sub> = 28V
	I <sub>o</sub> = 93mA
	P <sub>o</sub> = 0.7W

# - Parameter limited only by the external supply

Model Type references:

Model Type	Sensor Type	Model Number	Gas Group
Acetic Acid	Electro-Chemical	65-1080-ACID	I, IIB, IIC
Arsine	Electro-Chemical	65-1080-ASH3	I, IIB, IIC
Diborane	Electro-Chemical	65-1080-B2H6	I, IIB, IIC
Ethylene	Electro-Chemical	65-1080-C2H4	I, IIB, IIC
Tetrahydrothiophene	Electro-Chemical	65-1080-C4H8S	I, IIB, IIC
Formaldehyde	Electro-Chemical	65-1080-CH2O	I, IIB, IIC
Mercaptan	Electro-Chemical	65-1080-CH4S	I, IIB, IIC
Chlorine	Electro-Chemical	65-1080-CL2	I, IIB, IIC
Carbon Dioxide	Electro-Chemical	65-1080-CO2	I, IIB, IIC
Carbon Monoxide	Electro-Chemical	65-1080-CO	I, IIB, IIC
Phosgene	Electro-Chemical	65-1080-COCL2	I, IIB, IIC
Ethylene Oxide	Electro-Chemical	65-1080-ETO	I, IIB, IIC
Fluorine	Electro-Chemical	65-1080-F2	I, IIB, IIC
Hydrogen	Electro-Chemical	65-1080-H	I, IIB, IIC
Hydrogen Peroxide	Electro-Chemical	65-1080-H2O2	I, IIB, IIC
Hydrogen Sulphide	Electro-Chemical	65-1080-H2S	I, IIB, IIC
Hydrogen Chloride	Electro-Chemical	65-1080-HCL	I, IIB, IIC
Hydrogen Cyanide	Electro-Chemical	65-1080-HCN	I, IIB, IIC
Hydrogen Fluoride	Electro-Chemical	65-1080-HF	I, IIB, IIC
Hydrazine	Electro-Chemical	65-1080-N2H4	I, IIB, IIC
Ammonia	Electro-Chemical	65-1080-NH3	I, IIB, IIC
Nitric Oxide	Electro-Chemical	65-1080-NO	I, IIB, IIC
Nitrogen Oxide	Electro-Chemical	65-1080-NO	I, IIB, IIC
Nitrogen Dioxide	Electro-Chemical	65-1080-NO2	I, IIB, IIC
Oxygen	Galvanic Cell or Electro-Chemical	65-1080-O2	I, IIB, IIC
Ozone	Electro-Chemical	65-1080-O3	I, IIB, IIC
Phosphine	Electro-Chemical	65-1080-PH3	I, IIB, IIC
Hydrogen Selenide	Electro-Chemical	65-1080-SEH2	I, IIB, IIC
Silane	Electro-Chemical	65-1080-SIH4	I, IIB, IIC
Sulphur Dioxide	Electro-Chemical	65-1080-SO2	I, IIB, IIC
Methane	Mipex Infra-Red	65-1080-LEL	I, IIB
Methane	Mipex Infra-Red	65-1080-CH4	I, IIB
Carbon Dioxide	Mipex Infra-Red	65-1080-CO2	I, IIB
Client Specified Type	As Required	65-1080-xxx	I, IIB, IIC

xxx = gas type required