MTEx Laboratories

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Ontploffingvoorkomingstegnologie
Explosion Prevention Technologies

INSPECTION AUTHORITY (IA) CERTIFICATE

i.safe MOBILE GmbH.
i_Park Tauberfranken 10
97922 Lauda-Königshofen
Germany

Issued: 2024/10/08
Expire: 2027/10/08
Revision: 0
Job File: 2773

Applicant:
I.SAFE MOBILE (PTY) LTD.

For validity purposes, the following marking must be added to all equipment covered by this certificate:

IA Number:	MTEx-S/24.0456 X
Manufacturer:	i.safe MOBILE GmbH
Supplier:	i.safe MOBILE GmbH
Equipment:	intrinsically safe tablet
Model/Type:	IS940.1 / IS945.1
Optional Accessory:	IS-HS2A.1, IS-PTTB1A.1,IS-HDHS1x.1
Ex Rating:	Ex ib IIC T4 Gb
	Ex ib IIIC T135°C Db
Serial No:	All units imported between the issue and expiry dates of this Certificate.

Standards used:

SANS 60079-0: 2019 Ed.6 **IEC 60079-0: 2017 Ed.7**	**Explosive atmospheres – Part 0: General requirements.**
SANS 60079-11: 2024 Ed.5 **IEC 60079-11: 2023 Ed.7**	**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.

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(3) of the Occupational Health and Safety Act, provided that the apparatus is used as prescribed in accordance with the following **Notes**:

1) Compliance with any conditions set out in this Certificate.
2) This certificate only covers equipment imported between the "Issued" and "Expiry" dates of this certificate.
3) When the supporting Q.A.N. (Quality Assurance Notification) of the equipment manufacturer expires, it is the responsibility of the applicant (as mentioned above) to submit a valid Q.A.N to MTEx Laboratories.
4) It is the responsibility of the supplier to ensure that the marking label complies with the requirements of the relevant regulator.
5) Once issued, the certificate remains valid for the serviceable lifecycle of the device. The state of the device is validated by visual or close inspections, by the end user, at intervals not exceeding two years.

Reviewed By + Signature (TL):	A. van Niekerk	
Approved By + Signature (CB): (MTEx Laboratories Technical Signatory)	D. Young	

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA
AIA Number: E1

employment & labour
Department:
Employment and Labour
REPUBLIC OF SOUTH AFRICA
AIA Number: CL016

MTEx Laboratories is an Accredited Test Laboratory (ATL) in terms of the ARP 0108: "Regulatory Requirements for Explosion-Protected Apparatus".

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Template Ref: MTExDOC 101 Rev 10
(2023-08-02)

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1. OVERVIEW

The intrinsically safe tablet IS940.1 (Android operating system) / IS945.1 (Windows operating system) for Zone 1/21 is equipped with a 10.1- inch display, supports NFC, Bluetooth 5.2 and Wi Fi 6. The high-quality Qualcomm chipset ensures fast data processing for the most demanding industrial applications such as predictive maintenance. The 12-pin docking interface offers a convenient charging and data connection. The 16-pin ISM interface ensures a secure connection of audio accessories or other add-ons.

Further advantages are the high-resolution main camera, the powerful speakers, a replaceable battery and programmable buttons (e.g. for quick access or lone worker protection applications (SOS)).

2. REASON FOR REVIEW

Revision 0: ARP 0108 requirement (Initial IA Certificate).

3. DOCUMENTATION PROVIDED

- IECEx Certificate of Conformity (IECEx EPS 24.0001X, Issue 0).
- IECEx Quality Assessment Report (DE/EPS/QAR12.0003/15).

4. ELECTRICAL / SAFETY PARAMETERS

Electrical data:
Power supply: Changeable Li-Ion battery (4.2 V)

Interfaces:
The device has a 12-pin docking interface for the IS-DS940.1 docking station for charging and data transfer outside hazardous areas.

The entity parameters are defined in document 1065AD05.
The 12-pin docking interface can remain open inside hazardous areas.

The optional cover for this serves as protection against pollution.
The device also has a USB-C interface, which is also used for charging and data transfer outside hazardous areas.

Only the i.safe PROTECTOR 2.0, other accessories approved by i.safe MOBILE or other accessories that ensure $U_m = 5.88$ V may be connected to the USB-C interface.
The device's 16-pin ISM interface can be used within hazardous areas with approved audio accessories and add-ons.

The following accessories may be connected to the 16-pin ISM interface:
- IS-HS2A.1 in-ear headset
- IS-PTTB1A.1 PTT button with the IS-HDHS1x.1 headset
- Approved, intrinsically safe accessories that comply with the entity parameters of the 16-pin ISM interface in accordance with document 1065AD04

Headset variants IS-HDHS1x.1:
- IS-HDHS1A.1 Headband (Stereo)
- IS-HDHS1B.1 Neckband (Stereo)
- IS-HDHS1C.1 Helmet mount (Stereo)

The microSD cards IS-SD164.1 and IS-SD1128.1 may be used in the corresponding slot in potentially explosive atmospheres. Alternatively, the SD card connection has the following intrinsically safe connection parameters:

U_o = 5.88 V
C_o = 25 µF
L_o = 1 µH

A commercially available microSD card can be used in hazardous areas in the corresponding slot. The internal electrical capacitance and inductance are negligible and match the intrinsically safe connection parameters.

A nano SIM card that complies with the following intrinsically safe entity parameters may be used in the corresponding slot in the hazardous areas:

U_o = 5.88 V
C_o = 41 µF
L_o = 1 µH

A commercially available nano SIM card can be used in hazardous areas in the corresponding slot. The internal electrical capacitance and inductance are negligible and match the intrinsically safe entity parameters.

5. INSTALLATION INSTRUCTIONS

The instructions provided with the product shall be followed in detail to assure safe operation.

6. CONDITIONS OF CERTIFICATE (X)

- The battery may be charged and replaced outside explosion hazardous areas only.
- The device must be protected from impacts with high impact energy, against excessive UV light emission and high electrostatic charge processes.
- The USB-C interface is protected by an IP interface cover and may only be opened outside the hazardous areas. The 16-pin ISM interface must be closed with the corresponding cover when not in use in hazardous areas.
- The permitted ambient temperature range is -20 °C to +55 °C.

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End of Report