

# WORKMASTER™ HAZMAX™ FPA ESD



GB User Information  
FR Guide d'utilisation  
DE Benutzerinformation  
ES Manual de usuario  
IT Manuale d'uso  
NL Gebruikersinformatie



**workMaster™**  
by RESPIREX

## **GB Workmaster™ Hazmax™ FPA ESD - User Information**

The safety footwear supplied by Respirix International Ltd complies with the PPE Regulation (EU) 2016/425 requirements according to the European harmonized standard EN ISO 20345:2011.

Module B certificate issued by SGS FIMKO OY, Takomotie 8, 00380 Helsinki, Finland. UKCA Type-examination for Regulation 2016/425 by: Approved Body No. 0120, SGS United Kingdom Limited, Rossmoor Business Park, Ellesmere Port, South Wirral, Cheshire, CH65 3EN.

This product provides full protection against hazardous chemicals according to EN13832-3:2018 and EN943-2:2002. Workmaster™ Hazmax™ FPA ESD has surpassed the requirements of EN943-2 standard which requires suits/boots to have a minimum breakthrough time of 10 minutes when tested against the 15 chemicals listed in bold in the table below.

Chemical	CAS N°	Breakthrough Time (mins)
<b>Acetone</b>	<b>67-64-1</b>	<b>&gt;120</b>
<b>Acetonitrile</b>	<b>75-05-8</b>	<b>&gt;240</b>
Acrylic acid	79-10-7	>480
Acrylonitrile	107-13-1	>120
<b>Ammonia Gas</b>	<b>7664-41-7</b>	<b>&gt;480</b>
Ammonia solution 25%**	1336-21-6	>1921
Arsenic Acid	7778-39-4	>480
Bromine	7726-95-6	>420
1.3 Butadiene Gas	106-99-0	>180
<b>Carbon Disulphide</b>	<b>75-15-0</b>	<b>&gt;60</b>
<b>Chlorine Gas</b>	<b>7782-50-5</b>	<b>&gt;480</b>
Chromic Acid	-	>480
<b>Dichloromethane</b>	<b>75-09-2</b>	<b>&gt;60</b>
<b>Diethylamine</b>	<b>109-89-7</b>	<b>&gt;60</b>
Dimethylformamide	68-12-2	>180
<b>Ethyl Acetate</b>	<b>141-78-6</b>	<b>&gt;120</b>
Ethylene Dichloride	107-06-2	>480
Ethylene Oxide	75-21-8	>120
<b>Heptane</b>	<b>142-82-5</b>	<b>&gt;480</b>

Chemical	CAS N°	Breakthrough Time (mins)
Hydrofluoric Acid 48%	7664-39-3	>3960
<b>Hydrogen Chloride Gas</b>	<b>7647-01-0</b>	<b>&gt;480</b>
<b>Methanol</b>	<b>67-56-1</b>	<b>&gt;480</b>
Methyl Chloride Gas	74-87-3	>60
Nitric Acid	7697-37-2	>480
Nitro Benzene	98-95-3	>180
Oleum 40% Free SO <sub>3</sub>	8014-95-7	>480
30% Sodium Hydroxide**	1310-73-2	>1921
<b>Sodium Hydroxide 40%</b>	<b>1310-73-2</b>	<b>&gt;480</b>
Sodium Hypochlorite 13%**	7681-52-9	>1921
<b>Sulphuric Acid 96%</b>	<b>7664-93-9</b>	<b>&gt;480</b>
Tetrachloroethylene	127-18-4	>180
<b>Tetrahydrofuran</b>	<b>109-99-9</b>	<b>&gt;120</b>
<b>Toluene</b>	<b>108-88-3</b>	<b>&gt;240</b>
Toluene 2.4 Diisocyanate (tdi)	584-84-9	>480

*Additional data is available upon request*





Workmaster™ Hazmax™ FPA ESD boots have been tested with different chemicals given in the table below. The protection has been assessed under laboratory conditions and relates only to the chemicals given. The wearer should be aware that in case of contact with other chemicals or with physical stresses (high temperature, abrasion for example), the protection given by the boots may be adversely affected and necessary precautions should be taken.

All chemical permeation testing in accordance with EN369 or EN374-3 except \*\*tested in accordance with EN13832-3:2018.

Workmaster™ Hazmax™ FPA ESD boots protect the wearer from heat and flame up to 250°C on the sole for 40 minutes with a temperature rise < 42°C after 10 minutes (this is Type 3 or HI3) plus a radiant heat resistance of < 24°C after 40 seconds at a heat flux 20 kW/m². The boot will not flame or glow for more than 2 seconds according to EN 15090:2012. The Hazmax™ FPA ESD boot is marked F3A which indicates it meets the Type 3 requirements for insulation against heat of the sole level HI3, radiant heat of the upper and, flame resistance. In addition EN 15090:2012 requires the boot to meet Level 1 (> 2 hours permeation resistance) of EN 13832-3.

Marking denotes that the footwear is licensed according to PPE regulation as follows:

- Supplier - See sole and upper
- Country of origin and post code - See upper
- CE 2797- See upper - Notified Body responsible for Module D BSI Group The Netherlands B.V. Say Building, John M. Keynesplein 9, 1066 EP, Amsterdam, Netherlands
- UKCA 0086 - See upper; UK conformance assessed 0086 BSI, Davey Avenue, Knowlhill, Milton Keynes, MK5 8PP United Kingdom
- EN ISO 20345:2011- See upper; number of European standard
- S5 - See upper; energy absorption, anti-static and perforation resistant insert.
- HRO - See upper; denotes heat resistant outsole
- P - See upper; denotes penetration resistant outsole
- HI - See upper; denotes heat insulation outsole

- HI3 - See upper; denotes sole resistant to 250°C for 40 minutes, with a temperature inside of <42°C after 10 minutes.
- SRA - See upper; denotes slip resistant to soapy water on a ceramic tile.
- CI - See upper; cold insulation to EN ISO 20345
- FO - See upper; fuel resistant outsole
- SRC - See upper; denotes slip resistance to soapy water on ceramic tile and glycerol on steel to EN ISO 20345:2011
- A K-O-P Q R T - See upper; denotes that the boot has passed the EN 13832-3:2018 permeation and degradation test for A-Methanol CAS 67-56-1, K-40% Sodium Hydroxide solution CAS 1310-73-2, O-30%, Ammonia hydroxide CAS 1336-21-6, P-Hydrogen peroxide 30% CAS 7722-84-1, Q-Isopropanol CAS 67-63-0, R-Sodium Hypochlorite (13±1)%, T-Formaldehyde 37% CAS 50-00-0
- Size - See sole; UK & European Marking.
- Date of Manufacture - See upper; Week and Year.
-  See upper; Denotes chemical resistance
-  See upper; Denotes refer to user instructions
-  See upper; Indicates the types of protection in the bottom right corner is marked F3A this indicates Type 3 and antistatic.
-  See upper; pictogram denoting that the boot complies with EN 61340-5-1:2007 for electrostatic discharge when worn as part of an ESD compliant ensemble

It is important that the footwear selected is suitable for the protection required and the working environment. The suitability of the boots for a particular task can only be established once a full risk-assessment has been carried out.

## PRODUCT CARE

The boots should be visually inspected before being worn to check for:

- a. Beginning of pronounced and deep cracking cuts, abrasions, affecting half the thickness of the boot material.
- b. The upper shows areas with deformations, burns, splits, fusion or bubbles
- c. Upper and outsole separation of more than of >15 mm long and 5 mm wide and/or deep.
- d. The outsole shows cracks > 10 mm long and 3 mm wide and/or deep.
- e. The comfort insole shows pronounced deformation and crushing.

Damaged boots will not continue to give the specified level of protection. To ensure that the wearer continues to receive maximum protection, damaged boots should be replaced immediately.

If the yellow coloured midsole can be seen coming through the black rubber sole (except the 6mm diameter hole in the centre of the heel), this indicates the rubber sole is worn out and the boots should be replaced immediately.

Please ensure that all strong chemicals or other types of contamination are washed off as soon as possible. Serious damage may result if certain chemicals, fats & oils are not removed or if the footwear is not cleaned regularly after use.

If the boot has been in contact with acid, it should be drenched in a neutralising bath with a pH value of 9. The recommended neutraliser is a solution of bicarbonate of soda and water (6% bicarbonate of soda W/V) for approximately 10 minutes. If the boot is contaminated with an alkali, the alkali should be removed by drenching in clean water for approximately 10 minutes.

After decontamination the outer surfaces of the boot should be cleaned using a diluted solution of Citrikleen (5 to 20 parts water to 1 part Citrikleen) which should be applied using a soft cloth. After cleaning, the outer surfaces should be thoroughly rinsed with cold water.

The boot lining should be wiped with a mild detergent from time to time. Do not expose the boots to temperatures above 60°C when drying. If the footwear becomes cut or damaged, it will not continue to give the specified level of protection. To ensure that the wearer continues to receive maximum protection, the footwear should be immediately replaced.

The packaging of the footwear used for transportation to customers is designed to protect it until use. Storage in extremes of temperatures may affect its useful service life and should be avoided. Please store between 5°C and 25°C.

## LIMITATIONS OF USE

The Workmaster™ Hazmax™ FPA ESD boot is only suitable for use within a temperature range of -20°C to +60°C. Alternative footwear should be utilised for applications outside this range.

If the yellow can be seen through the black sole other than the 6 mm circle in the centre of the heel then the boots are worn out and should be replaced.

The Workmaster™ Hazmax™ FPA ESD boot has a shelf-life of 10 years. Any boots that have remained unused for a period of 10 years should be replaced. The date of manufacture is clearly marked on the upper of the boot as detailed overleaf.

## ANTISTATIC FOOTWEAR

Antistatic footwear should be used if it is necessary to minimize electrostatic build-up by dissipating electrostatic charges, thus avoiding the risk of spark ignition of, for example flammable substances and vapours, and if the risk of electric shock from any electrical apparatus or live parts has not been completely eliminated. It should be noted, however, that antistatic footwear cannot guarantee an adequate protection against electric shock as it introduces only a resistance between foot and floor. If the risk of electric shock has not been completely eliminated, additional measures to avoid this risk are essential. If there is a risk of electric shock Respirix would recommend the use of our Workmaster™ Dielectric footwear which can be found at [www.workmasterboots.com](http://www.workmasterboots.com). Such measures, as well as the additional tests mentioned below, should be a routine part of the accident prevention programme at the workplace.

Experience has shown that, for antistatic purposes, the discharge path through a product should normally have an electrical resistance of less than 1000 MΩ at any time throughout its useful life. A value of 100 kΩ is specified as the lowest limit of resistance of a product when new, in order to ensure some limited protection against dangerous electric shock or ignition in the event of any electrical apparatus becoming defective when operating at voltages of up to 250 V. However, under certain conditions, users should be aware that the footwear might give inadequate protection and additional provisions to protect the wearer should be taken at all times.

The electrical resistance of this type of footwear can be changed significantly by flexing, contamination or moisture. This footwear will not perform its intended function if worn in wet conditions. It is, therefore, necessary to ensure that the product is capable of fulfilling its designed function of dissipating electrostatic charges and also of giving some protection during the whole of its life. The user is recommended to establish an in-house test for electrical resistance and use it at regular and frequent intervals.

If the footwear is worn in conditions where the soling material becomes contaminated, wearers should always check the electrical properties of the footwear before entering a hazard area.

Where antistatic footwear is in use, the resistance of the flooring should be such that it does not invalidate the protection provided by the footwear. In use, no insulating elements, with the exception of normal hose, should be introduced between the inner sole of the footwear and the foot of the wearer. If any insert is put between the inner sole and the foot, the combination footwear/insert should be checked for its electrical properties.

## INSOLE

Product testing was carried out with the insole in place. The footwear should only be used with the insole in place, removal may have detrimental effects on the protective properties of the footwear. If replacement is required only comparable insoles supplied by Respirix should be used.

## ESD FOOTWEAR

Workmaster™ Hazmax™ FPA ESD boots when worn as part of an ESD compliant ensemble meet the requirements of the European standard EN 61340-5-1:2007 for electrostatic discharge. The electrical resistance of the ESD compliant ensemble when measured in accordance with EN 61340-5-1 is less than  $3.5 \times 10^7 \Omega$ . Below are some typical tests results carried out under laboratory conditions of 23°C and 50% humidity. ESD properties must be determined for the environment the Hazmax™ FPA ESD boots are to be used.

Size	39 (EU) / 6 (UK)	42 (EU) / 8 (UK)	45 (EU) / 11 (UK)
Requirement	$R < 3.5 \times 10^7 \Omega$	$R < 3.5 \times 10^7 \Omega$	$R < 3.5 \times 10^7 \Omega$
Test Result	$1.9 \times 10^7 \Omega$	$3.3 \times 10^7 \Omega$	$2.3 \times 10^7 \Omega$

Respirix strongly recommends that NO alterations or additional items are added such as insoles to the Hazmax™ FPA ESD boot as this will severely affect the ESD performance of the footwear.

## DECLARATION OF CONFORMITY

The Declaration of Conformity for the Workmaster™ Hazmax™ FPA ESD boots can be downloaded from [www.workmasterboots.com/DOC](http://www.workmasterboots.com/DOC)





RESPIREX™

+44 (0)1737 778600

info@respirex.co.uk

www.respirexinternational.com

Respirex International Limited, Unit F, Kingsfield Business Centre, Philanthropic Road,  
Redhill, Surrey, RH1 4DP, United Kingdom