

HAZMAX™ ESD FPA BOOTS



workMaster™
by RESPIREX

Petrochemical

Emergency Services

Industrial Chemicals

Hazardous Waste

Pharmaceuticals

A heat-resistant, chemically protective, Electro-Static Discharge (ESD) safety boot with an integral steel toe cap and slip-resistant vulcanized rubber sole designed specifically to meet the needs of emergency responders.

Features

- Manufactured from our proprietary **Hazmax compound**, providing significantly better chemical resistance than PVC or PU materials
- **Chemically resistant** boot certified to **EN 13832-3:2018** (footwear protecting against chemicals)
- Conforms to **EN 943-2** (Chemical protective clothing) and certified to this standard as part of an appropriate Respirax gas-tight suit
- Conforms to **EN 15090:2012 F3A Fire fighter boot** standard
- **Heat insulation of the sole EN 15090:2012 (HI3)**: The sole withstands 40 minutes at 250°C with an increase in internal temperature of less than 21°C after 10 minutes
- **Antistatic** - Electrical resistance meets the requirements of EN ISO 20345:2011 A (0.1MΩ to 1,000MΩ)
- **ESD** properties meet the requirements of EN 61340-5-1:2016 (0.1MΩ to 100MΩ) and EN 61340-5-1:2007 (0.1MΩ to 35MΩ)
- Integral 200 Joule epoxy coated steel **toecap** and stainless steel penetration resistant **mid-sole**
- **Heat resistant sole** EN 20345:2012 **HRO**, 60 seconds at 300°C
- **Cold insulation** to EN ISO 20345:2012 **CI**
- **Fuel and oil resistant** upper and sole
- **Vulcanized rubber sole** for improved slip resistance - 30% better than a conventional safety boot sole
- **Durable, cut-resistant** vulcanised rubber sole, significantly extends working life, even in harsh terrain
- Cleated outsole for **maximum grip** in wet and oily conditions (**SRC**)
- **Energy absorbing** tunnel system in heel to EN 20345:2011 **E**
- Ergonomic **cushioned insole** (removable & machine washable) for greater wearer comfort
- **Seamless** construction
- **Kick-off lug**
- Adjustable height
- Knitted nylon lining
- CE marked on the shaft with date and year of manufacture
- REACH Compliant

Care

- Machine washable at up to 40°C
- Shelf life of over 10 years

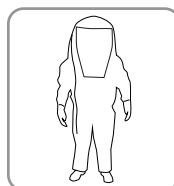
Sizes

UK	3	4	5	6	7	8	9	10	11	12	13	14	15
EU	35	36	37	39	41	42	43	44	45	46	47	49	50



EN 13832-3

Chemical
Protective
Footwear



Designed for use with the **GTL ESD** Gas-Tight Suit. The Hazmax ESD FPA boot allows the suit to be worn in **Ex atmospheres** while meeting the requirements of EN 943-2:2019(ET).

US	4	5	6	7	8	9	10	11	12	13	14	15	16
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Certification

- **EN 13832-3: 2018** A,K,O,P,Q,R,T
Chemical Protective Footwear
- **EN 15090:2012**, Class 2 - **Type F3A** (HI3, CI, SRC)
Footwear for Firefighters
- **EN ISO 20345:2011** S5 SRC HI HRO CI FO
Safety Footwear
- **EN 61340-5-2:2006** - Table 2 ($R_t < 1 \times 10^9$)
- **PPE Regulation (EU) 2016/425**
Personal Protective Equipment

WorkMaster™ is a division of Respirax International Limited
Specifications, configurations and colours are subject to change without notice.
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HAZMAX™ ESD FPA BOOTS - CHEMICAL PERMEATION

CHEMICAL	CAS NO.	LETTER	METHOD	BREAK-THROUGH
Acetic acid (Glacial)	64-19-7	N	EN 16523	> 12 Hours
Acetone	67-64-1	B	EN374-3	> 2 Hours
Acetone Cyanohydrin	75-86-5		EN374-3	> 8 Hours
Acetonitrile	75-05-08	C	EN374-3	> 6 Hours
Acrylic Acid	79-10-7		EN374-3	> 8 Hours
Acrylonitrile	107-13-1		EN374-3	> 2 Hours
Ammonia 33%	1336-21-6	O	EN 16523	> 32 Hours
Ammonia Gas	7664-41-7		EN374-3	> 8 Hours
Ammonium Hydroxide Solution 5% free NH ₃	1336-21-6		EN 16523	> 32 Hours
Ammonium Pentadecafluorooctanoate (30% in water)	3825-26-1		EN374-3	> 8 Hours
Aniline	62-53-3		EN374-3	> 8 Hours
Anti-knock(Tetraethyl lead 60% Dibromoethane 30%/ Dichloroethane 10% TEL-CB)	78-00-2 / 106-03-4 / 107-06-2		EN374-3	> 8 Hours
Aqueous Phenol 85%	108-95-2		EN374-3	> 8 Hours
Arsenic Acid	7778-39-4		EN374-3	> 8 Hours
Benzene	71-43-2		EN374-3	> 4 Hours
Benzyl Chloride	100-44-7		EN374-3	> 8 Hours
Bromine	7726-95-6		EN374-3	> 7 Hours
Buta-1,3diene Gas	106-99-0		EN374-3	> 3 Hours
Butyl Acetate	123-86-4		EN374-3	> 6 Hours
Cable oil			EN374-3	> 8 Hours
Carbazole	86-74-8		EN374-3	> 8 Hours
Carbon Disulphide	75-15-0	E	EN374-3	> 1 Hour
Chlorine Gas	7782-50-5		EN374-3	> 3 Hours
Chloroacetic Acid 85%	79-11-8		EN 16523	> 32 Hours
Chromic Acid	1333-82-0		EN374-3	> 8 Hours
Cyclohexylamine	108-91-8		EN374-3	> 8 Hours
Dichloromethane	75-09-02	D	EN374-3	> 1 Hour
Diethylamine	109-89-7	G	EN374-3	> 2 Hours
Diethylene Glycol dimethylether	111-46-6		EN374-3	> 8 Hours
Dimethyl Formamide	68-12-2		EN374-3	> 5 Hours
Epichlorohydrin	106-89-8		EN374-3	> 7 Hours
Ethanol (Ethyl Alcohol)	64-17-5		EN374-3	> 8 Hours
Ethyl Acetate	141-78-6	I	EN374-3	> 4 Hours
Ethylene Glycol	107-21-1		EN374-3	> 8 Hours
Ethylene Dichloride	107-06-2		EN374-3	> 8 Hours
Ethylene Oxide	75-21-8		EN374-3	> 2 Hours
Ethylenediamine tetra-acetic acid tetrasodium salt (EDTA) 5%	64-02-8		EN374-3	> 8 Hours
Formaldehyde 37%	79-11-8	T	EN374-3	> 8 Hours
Formic Acid 65%	64-18-6		EN374-3	> 8 Hours
Heptane	142-82-5	J	EN374-3	> 8 Hours
Hexane	110-54-3		EN374-3	> 7 Hours
Hydrazine	302-01-2		EN374-3	> 8 Hours
Hydrazine 5%	7803-57-8		EN374-3	> 8 Hours
Hydrochloric Acid 37%	7647-01-0		EN 16523	> 32 Hours
Hydrofluoric Acid 48%	7664-39-3	S	EN374-3	> 66 Hours
Hydrofluoric Acid 73%	7664-39-3		EN374-3	> 8 Hours
Hydrogen Chloride Gas	7647-01-0		EN374-3	> 8 Hours
Hydrogen Fluoride gas anhydrous	7664-39-3		EN374-3	> 1 Hour
Hydrogen Peroxide (10 volume (3%) solution)	7722-84-1		EN374-3	> 8 Hours
Hydrogen Peroxide 50%	7722-84-1	P	EN374-3	> 8 Hours

CHEMICAL	CAS NO.	LETTER	METHOD	BREAK-THROUGH
Iso-butane	75-28-5		EN374-3	> 8 Hours
Iso-butane followed by Hydrofluoric acid 71-75%	75-28-5 + 7664-39-3		EN374-3	> 8 Hours
Iso-propanol (IPA)	67-63-0		EN 16523	> 32 Hours
m-Cresol	108-39-4		EN374-3	> 8 Hours
Methanol	67-56-1	A	EN374-3	> 8 Hours
Methyl Ethyl Ketone (M.E.K) 2-Butanone	78-93-3		EN374-3	> 2 Hours
Methyl Iodide 99%	74-88-4		EN374-3	> 1.5 Hours
Methyl Methacrylate	80-62-6		EN 369	> 3 Hours
methyl-1,2-pyrolidone	872-50-4		EN369	> 8 Hours
Methylene Chloride Gas	74-87-3		EN374-3	> 1 Hour
Monochloroacetic acid	79-11-8		EN374-3	> 8 Hours
Naphalene	91-20-3		EN374-3	> 8 Hours
N,N-Dimethylaniline	121-69-7		EN374-3	> 8 Hours
N,N-dimetyl acetamide	127-19-5		EN374-3	> 8 Hours
Nitric Acid 50%	7697-37-2	M	EN 16523	> 32 Hours
Nitric Acid 70% conc	7697-37-2		EN 16523	> 32 Hours
Nitric Acid Etchant 80/20	7697-37-2		EN374-3	> 8 Hours
Nitro Benzene	98-95-3		EN374-3	> 3 Hours
Oleum 40% SO ₃	8014-95-7		EN374-3	> 8 Hours
Oxalic Acid saturated solution	6153-56-6		EN374-3	> 8 Hours
Phenol 50% in Methanol	108-95-2/ 67-56-1		EN374-3	> 8 Hours
Phosphoric acid 25%	7664-38-2		EN 16523	> 32 Hours
Phosphoric acid 75%	7664-38-2		EN 16523	> 32 Hours
Propylene 1,2 oxide	75-56-9		EN374-3	> 1 Hours
Red Fuming Nitric acid	7697-37-2		EN374-3	> 4 Hours
Sodium Cyanide 30wt%	143-33-9		EN374-3	> 8 Hours
Sodium Hydroxide 40%	1310-73-2	K	EN374-3	> 8 Hours
Sodium Hypochlorite 16%	7681-52-9	R	EN374-3	> 8 Hours
Styrene	100-42-5		EN374-3	> 8 Hours
Sulphuric Acid 96%	7664-93-9	L	EN374-3	> 8 Hours
Tetrachloroethylene	127-18-4		EN374-3	> 3 Hours
Tetraethyl Lead (Octel Anti Knock)	78-00-2		EN374-3	> 8 Hours
Tetrahydrofuran	109-99-9	H	EN374-3	> 3 Hours
Toluene	108-88-3	F	EN374-3	> 4 Hours
Toluene 2,4 Diisocyanate	584-84-9		EN374-3	> 8 Hours
Trichloroethane	71-55-6		EN374-3	> 6 Hours
Trichloroethylene 1,1,2	79-01-6		EN374-3	> 3 Hours
Triethanol-amine	102-71-6		EN374-3	> 8 Hours
Triethylene Glycol	112-27-6		EN374-3	> 8 Hours
Trigonox K-80 Cumyl hydroperoxide 80% / 20% Cumene	80-15-9/ 98-82-8		EN 369	> 8 Hours
Xylene	1330-20-7		EN374-3	> 4 Hours

Chemicals in **bold** are the 15 standard test chemicals defined in EN943-2:2002

WARFARE AGENT	CAS NO.	METHOD	BREAKTHROUGH TIME
Cyanogen Chloride	506-77-4	NFPA	No permeation detected
Lewisite	541-25-3	NFPA	No permeation detected
Mustard Gas	505-60-2	NFPA	No permeation detected
Saren Gas	107-44-8	NFPA	No permeation detected
VX	50782-69-9	Finabel 0.7.C.	> 48 Hours
GD (Soman)	96-64-0	Finabel 0.7.C.	> 24 Hours