

# WORKMASTER™ HAZMAX™ ESD BOOTS



## RESPIREX

Pharmaceuticals

Electronics

A chemically protective Electro-Static Discharge (ESD) boot with an integral steel toe cap and vulcanized rubber sole for superior slip resistance. Suitable for applications such as pharmaceutical electro-protective areas.



**EN 13832**  
Chemical  
Protection

### Boot Shaft

- Green Hazmax chemically resistant compound shaft certified to EN 13832
- Conforms to EN 943-1 (Chemical protective clothing) and certified to this standard as part of an appropriate Respirex gas tight suit
- Meets the requirements of NFPA 1991 (Chemical Vapour protection)
- For use in EPA areas conforming to EN 61340-5 (ESD 99.6 MΩ dry, 11.8 MΩ wet EN ISO 20345)
- 200 Joule Epoxy coated Steel toe cap to EN ISO 20345
- Seamless construction
- Kick off lug
- Extra shin protection
- Adjustable height
- Ankle guard
- Knitted nylon lining
- Moisture absorbing insole (removable and machine washable)
- CE marked on the shaft with date and year of manufacture

### Boot Sole

- Black vulcanized rubber sole for maximum grip - 30% better than a conventional safety boot sole
- Slip resistance performance twice that required by EN 13287 SRA and SATRA TM144 standards
- Two to three times the wear resistance of conventional soles
- Stainless steel, penetration resistant mid-sole to EN ISO 20345 S5
- Fuel and oil resistant
- Greater cut resistance than conventional soles
- Resistance to hot contact 60 seconds 300°C
- Energy absorbing tunnel system conforms to EN ISO 20345 S5
- Cold insulation to EN ISO 20345

### Care

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

### Certification

Chemical Protective Footwear	EN 13832 pt 3
Safety Footwear	EN ISO 20345 S5 HRO SRA CI
Personal Protective Equipment	PPE DIR 89/686/EEC

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



Vulcanized Rubber Sole

Respirex International Limited

www.respirexinternational.com

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

Tel: +44 (0) 1737 778600 Fax: +44 (0) 1737 779441 E-mail: info@respirex.co.uk

# HAZMAX™ ESD BOOTS - CHEMICAL PERMEATION

Chemical	CAS no.	Method	Breakthrough time
Acetic acid (Glacial)	64-19-7	EN374-3	Over 8 HOURS
Acetone	67-64-1	EN374-3	Over 2 HOURS
Acetone Cyanohydrin	75-86-5	EN374-3	Over 8 HOURS
Acetonitrile	75-05-08	EN374-3	Over 6 HOURS
Acrylic Acid	79-10-7	EN374-3	Over 8 HOURS
Acrylonitrile	107-13-1	EN374-3	Over 2 HOURS
Ammonia 5%	1336-21-6	EN374-3	Over 8 HOURS
Ammonia Gas	7664-41-7	EN374-3	Over 8 HOURS
Ammonium Pentadecafluoro-octanoate (30% in water)	3825-26-1	EN374-3	Over 8 HOURS
Aniline	62-53-3	EN374-3	Over 8 HOURS
Anti-knock(Tetraethyl lead 60%Dibromoethane 30%/ Dichloroethane 10% TEL-CB	78-00-2 / 106-03-4 / 107-06-2	EN374-3	Over 8 HOURS
Aqueous Phenol 85%	108-95-2	EN374-3	Over 8 HOURS
Arsenic Acid	7778-39-4	EN374-3	Over 8 HOURS
Benzene	71-43-2	EN374-3	Over 4 HOURS
Benzene 85.5%/Toluene 8.6%/ Xylene3.2%/ Naphalene2.7%		EN374-3	Over 3 Hours Benzene only
Benzyl Chloride	100-44-7	EN374-3	Over 8 HOURS
Bromine	7726-95-6	EN374-3	Over 7 HOURS
Buta-1,3diene Gas	106-99-0	EN374-3	Over 3 HOURS
Butyl Acetate	123-86-4	EN374-3	Over 6 HOURS
Cable oil		EN374-3	Over 8 HOURS
Carbazole	86-74-8	EN374-3	Over 8 HOURS
Carbon Disulphide	75-15-0	EN374-3	Over 1 HOUR
Chlorine Gas	7782-50-5	EN374-3	Over 3 HOURS
Chromic Acid	1333-82-0	EN374-3	Over 8 HOURS
Cyanogen Chloride	506-77-4	NFPA	No permeation detected
Cyclohexylamine	108-91-8	EN374-3	Over 8 HOURS
Dichloromethane	75-09-02	EN374-3	Over 1 HOUR
Diethylamine	109-89-7	EN374-3	Over 2 HOURS
Diethylene Glycol dimethylether	111-46-6	EN374-3	Over 8 HOURS
Dimethyl Formamide	68-12-2	EN374-3	Over 8 HOURS
Dimethylformamide	68-12-2	EN374-3	Over 3 HOURS
Epichlorohydrin	106-89-8	EN374-3	Over 7 HOURS
Ethanol (Ethyl Alcohol)	64-17-5	EN374-3	Over 8 HOURS
Ethyl Acetate	141-78-6	EN374-3	Over 4 HOURS
Ethylene Glycol	107-21-1	EN374-3	Over 8 HOURS
Ethylene Dichloride	107-06-2	EN374-3	Over 8 HOURS
Ethylene Oxide	75-21-8	EN374-3	Over 2 HOURS
Ethylenediamine tetra-acetic acid tetrasodium salt(EDTA) 5%	64-02-8	EN374-3	Over 8 HOURS
Formaldehyde 37 %	79-11-8	EN374-3	Over 8 HOURS
Formic Acid 65%	64-18-6	EN374-3	Over 8 HOURS
Hexane	110-54-3	EN374-3	Over 7 HOURS
Hydrazine	302-01-2	EN374-3	Over 8 HOURS
Hydrazine 5%	7803-57-8	EN374-3	Over 8 HOURS
Hydrochloric Acid 48%	7647-01-0	EN374-3	Over 8 HOURS
Hydrofluoric Acid 48%	7664-39-3	EN374-3	Over 8 HOURS
Hydrofluoric Acid 48%	7664-39-3	EN374-3	Over 66 HOURS
Hydrofluoric Acid 73%	7664-39-3	EN374-3	Over 8 HOURS
Hydrogen Chloride Gas	7647-01-0	EN374-3	Over 8 HOURS

Chemical	CAS no.	Method	Breakthrough time
Hydrogen Fluoride gas anhydrous	7664-39-3	EN374-3	Over 1 HOUR
Hydrogen Peroxide (10 volume (3%) solution)	7722-84-1	EN374-3	Over 8 HOURS
Hydrogen Peroxide (50%)	7722-84-1	EN374-3	Over 8 HOURS
Iso-butane	75-28-5	EN374-3	Over 8 HOURS
Iso-butane followed by Hydrofluoric acid 71-75%	75-28-5 + 7664-39-3	EN374-3	Over 8 HOURS
Iso-propanol (IPA)	67-63-0	EN374-3	Over 8 HOURS
Lewisite	541-25-3	NFPA	No permeation detected
m-Cresol	108-39-4	EN374-3	Over 8 HOURS
Methanol	67-56-1	EN374-3	Over 8 HOUR
Methyl Ethyl Ketone (M.E.K) 2-Butanone	78-93-3	EN374-3	Over 2 HOURS
Methyl Iodide 99%	74-88-4	EN374-3	Over 1.5 HOURS
Methyl Methacrylate	80-62-6	EN 369	Over 3 HOURS
methyl-1,2-pyrrolidone	872-50-4	EN369	Over 8 HOURS
Methylene Chloride Gas	74-87-3	EN374-3	Over 1 HOUR
Monochloroacetic acid	79-11-8	EN374-3	Over 8 HOURS
Mustard Gas	505-60-2	NFPA	No permeation detected
Naphalene	91-20-3	EN374-3	Over 8 HOURS
N,N-Dimethylaniline	121-69-7	EN374-3	Over 8 HOURS
N,N-dimetyl acetamide	127-19-5	EN374-3	Over 8 HOURS
Nitric Acid 50%	7697-37-2	EN374-3	Over 8 HOURS
Nitric Acid 70% conc	7697-37-2	EN374-3	Over 8 HOURS
Nitric Acid Etchant 80/20	7697-37-2	EN374-3	Over 8 HOURS
Nitro Benzene	98-95-3	EN374-3	Over 3 HOURS
Oleum 40% SO3	8014-95-7	EN374-3	Over 8 HOURS
Oxalic Acid saturated solution	6153-56-6	EN374-3	Over 8 HOURS
Phenol 50% in Methanol	108-95-2/67-56-1	EN374-3	Over 8 HOURS
Phosphoric acid 25%	7664-38-2	EN374-3	Over 8 HOURS
Phosphoric acid 75%	7664-38-2	EN374-3	Over 8 HOURS
Propylene 1,2 oxide	75-56-9	EN374-3	Over 1 HOUR
Red Fuming Nitric acid	7697-37-2	EN374-3	Oner 4 HOURS
Saren Gas	107-44-8	NFPA	No permeation detected
Sodium Cyanide 30wt%	143-33-9	EN374-3	Over 8 HOURS
Sodium Hydroxide 40%	1310-73-2	EN374-3	Over 8 HOURS
Sodium Hypochlorite 16%	7681-52-9	EN374-3	Over 8 HOURS
Styrene	100-42-5	EN374-3	Over 8 HOURS
Sulphuric Acid 96%	7664-93-9	EN374-3	Over 8 HOURS
Tetrachloroethylene	127-18-4	EN374-3	Over 3 HOURS
Tetraethyl Lead (Octel Anti Knock)	78-00-2	EN374-3	Over 8 HOURS
Tetrahydrofuran	109-99-9	EN374-3	Over 3 HOURS
Toluene	108-88-3	EN374-3	Over 4 HOURS
Toluene 2,4 Diisocyanate	584-84-9	EN374-3	Over 8 HOURS
Trichloroethane	71-55-6	EN374-3	Over 6 HOURS
Trichloroethylene 1,1,2	79-01-6	EN374-3	Over 3 HOURS
Triethanol-amine	102-71-6	EN374-3	Over 8 HOURS
Triethylene Glycol	112-27-6	EN374-3	Over 8 HOURS
Trigonox K-80 Cumyl hydroperoxide 80% / 20% Cumene	80-15-9/ 98-82-8	EN 369	Over 8 HOURS
VX	50782-69-9	NFPA	No permeation detected
Xylene	1330-20-7	EN374-3	Over 4 HOURS