



CBRN S5 SAFETY BOOTS

Specifically developed for CBRN response, the Hazmax™ CBRN S5 safety boot provides the same comfort and chemical resistance as our popular Hazmax™ chemical safety boots, but with enhanced protection against chemical warfare agents (see page 3 for test data).

Hazmax™ boots are trusted around the world by industry and the emergency services to protect the wearer against hazardous and aggressive chemicals, with chemical permeation data available for 100+ common chemicals (see back pages).

CERTIFICATION

- **EN 13832-3: 2018 A,K,O,P,Q,R,T**
Chemical Protective Footwear
- **EN ISO 20345:2022**
S5 SR HRO CI FO
Safety Footwear
- **PPE Regulation (EU) 2016/425**
Personal Protective Equipment



SPECIFICATIONS



Chemically resistant boot certified to **EN 13832-3:2018** (footwear protecting against chemicals)



Heat resistant sole EN ISO 20345 **HRO** 60 seconds at 300°C



S5 Category Safety Boot Complies with the requirements for safety footwear in EN ISO 20345



Cold insulation to EN ISO 20345 **CI** Internal temperature drops by less than 0.5°C after 30 mins inside a chamber at -17°C, **9.5°C** better than required for CI marking



Cleated vulcanised rubber outsole for **maximum grip** in wet and oily conditions (**SR**)



Energy absorbing tunnel system in heel to EN ISO 20345 **E**



Integral 200 Joule epoxy coated steel **toecap** and stainless steel 1100N penetration resistant **mid-sole**



Antistatic - Electrical resistance meets the requirements of EN ISO 20345 A (0.1MΩ to 1,000MΩ)



Fuel and oil resistant upper and sole ensuring the working life of the boot won't be compromised if used in oily environments



Ladder Grip (LG) Additional cleats added to the instep of the footwear to improve grip on the rungs of a ladder.



HAZMAX™ CBRN



workMaster™
by RESPIREX

CBRN S5 SAFETY BOOTS

CWA Protection

Hazmax™ CBRN Boots have been specifically developed to offer enhanced Chemical Warfare Agent protection and have been tested against a wide variety of agents

Chemically Resistant

Highly chemically resistant Hazmax™ compound provides unrivalled protection against aggressive chemicals like acids, including >32 hours against concentrated (96%) Sulphuric Acid

Ergonomic cushioned insole

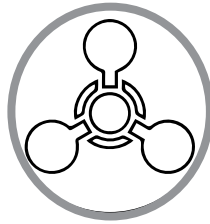
Fitted as standard, our latest cushioned insoles provide excellent wearer comfort and support and significantly improve thermal insulation

Vulcanised rubber sole

Provides excellent slip resistance (SR), and far greater durability than conventional moulded soles

Kick-off lug

For easy 'hands-free' removal of the boots.



OPTIONS



HAZMAX CBRN-C A metal-free version of the Hazmax CBRN boot with composite toe-cap and mid-sole.



CBRN Overboots A quick-don ambidextrous overboot for use over the top of combat boots utilising the same CWA resistant compound as the Hazmax CBRN boot.

CARE

- Machine washable at up to 40°C
- Shelf life of over 10 years
- All Workmaster boots are REACH compliant, PFAS free and CE marked on the shaft with date and year of manufacture

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

Note: The height of the boot can be adjusted by trimming down to the second cut line moulded into the shaft of the boot

Specifications, configurations and colours are subject to change without notice.

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WARFARE AGENT TESTING

WARFARE AGENT	CODE	CAS NUMBER	TEST METHOD	BREAKTHROUGH TIME
Cyanogen Chloride	CK	506-77-4	ISO 6529:2013	> 6 hours
HD Mustard	HD	505-60-2	TOP 8-2-501	> 24 hours*
Hydrogen Cyanide	AC	74-90-8	ISO 6529:2013	> 8 hours
Lewisite	L	40334-70-1	Finabel 0.7C	> 24 hours
Novachok A 234			LVAP	> 24 hours*
Phosgene	CG	75-44-5	ISO 6529:2013	> 8 hours
Sarin	GB	107-44-8	Finabel 0.7C	> 6 hours
Soman	GD	96-64-0	TOP 8-2-501	> 24 hours*
Tabun	GA	77-81-6	Finabel 0.7C	> 24 hours
TGD	TGD		TOP 8-2-501	> 24 hours*
VX	VX	50782-69-9	LVAP	> 24 hours*

*Amount permeating over 24 hours was less than 0.1 µg/cm²

CHEMICAL PERMEATION DATA

CHEMICAL	CAS NO.	LETTER	METHOD	BREAKTHROUGH
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 Pentadecafluoro-octanoate (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

CHEMICAL	CAS NO.	LETTER	METHOD	BREAKTHROUGH
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
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-pyrrolidone	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 50%	7664-93-9	L	EN 16523	> 8 Hours
Sulphuric Acid 96%	7664-93-9		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