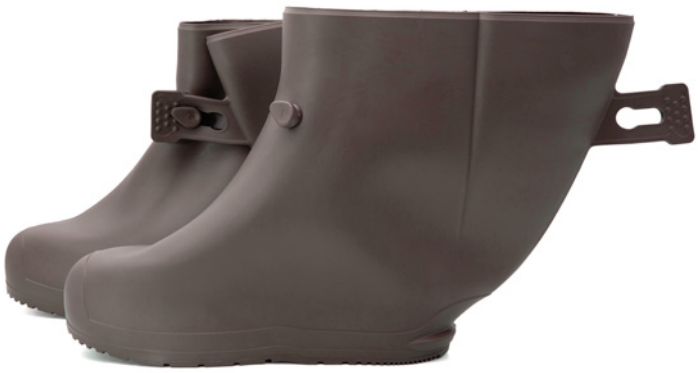
# CBRN OVERBOOTS

workMaster™ by RESPIREX

## AMBIDEXTROUS OVERBOOTS

A chemically protective, anti-static overboot with an ambidextrous quick-don design, specifically engineered to fit over standard combat boots. Tested against a broad range of hazardous chemicals and chemical warfare agents, the boot design can be fastened single-handedly in less than five seconds.

Workmaster™ 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 page).



## CERTIFICATION

- **EN 13832-3: 2018** A,K,O,P,Q,R,T
  Chemical Protective Footwear
- **EN ISO 20347:2012** OB SRA A FO
  Occupational Footwear
- **PPE Regulation (EU) 2016/425**
  Personal Protective Equipment

## SPECIFICATIONS

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


**OB Category Occupational Footwear**
Complies with the requirements for occupational footwear in EN ISO 20347


**Slip-resistant outsole** (**SRA**)

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

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

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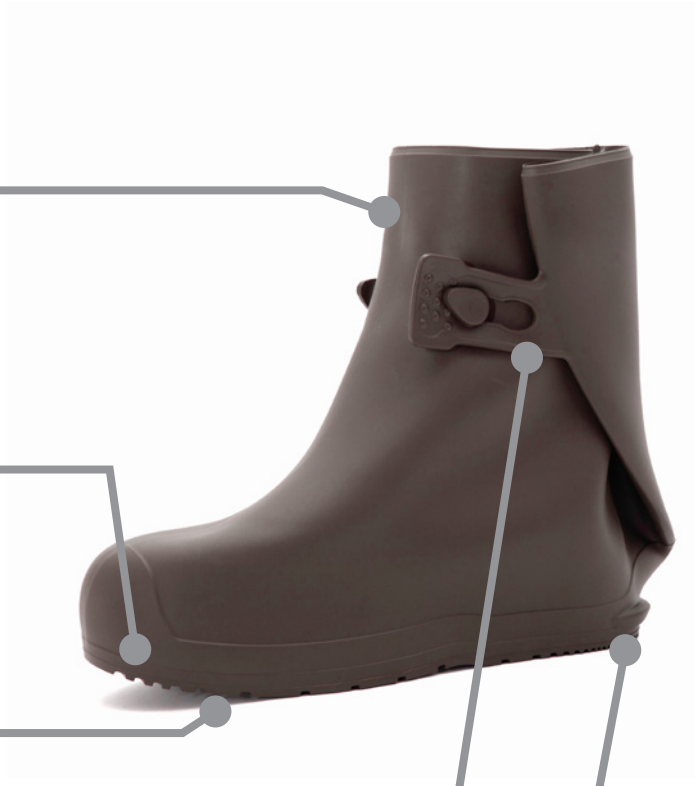
**Extensive CWA Testing**
Greater than 24 hours permeation resistance against HD Mustard, VX & GD chemical warfare agents (see page 3) and excellent resistance to decontamination solutions

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



**Slip resistant**, non-clogging sole

**Rear Opening Ambidextrous Design** ensures the boot is quick and easy to fit and remove and allows the boot to be worn on either the right or left foot to simplify fitment over combat boots

**Kick-off lug**
For easier removal of the boots after they have been unfastened.

## OPTIONS

**HAZMAX CBRN S5 BOOT**
A chemical safety boot designed for enhanced protection against chemical warfare agents

## 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

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

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## AMBIDEXTROUS OVERBOOTS

### Warfare Agent Testing

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

### Sizing

Our CBRN Overboots are available in seven sizes to ensure a secure fit and complete coverage over military issue combat boots

| | Part No. (Olive Green) | Part No. (Combat-Black) | US | EN | UK | Height |
|---|---|---|---|---|---|---|
| X-Small | B01391/OG | B01391/BLK | 3 - 4½ | 34 - 35 | 2 - 3½ | 262 mm |
| Small | B01392/OG | B01392/BLK | 5 - 6½ | 37 - 38 | 4 - 5½ | 266 mm |
| Medium | B01393/OG | B01393/BLK | 7 - 8½ | 39 - 41 | 6 - 7½ | 270 mm |
| Large | B01394/OG | B01394/BLK | 9 - 10½ | 42 - 43 | 8 - 9 | 275 mm |
| X-Large | B01395/OG | B01395/BLK | 11 - 12 | 44 - 45 | 10 - 11 | 282 mm |
| XX-Large | B01396/OG | B01396/BLK | 13 - 14 | 46 - 47 | 12 - 13 | 290 mm |
| XXX-Large | B01397/OG | B01397/BLK | 15 - 16 | 48 - 50 | 14 - 15 | 298 mm |

### NATO Stock Numbers (Combat Black)

| | | | | | |
|---|---|---|---|---|---|
| XS | 8430-99-472-1024 | L | 8430-99-969-4195 | XXXL | 8430-99752-8664 |
| S | 8430-99-176-1246 | XL | 8430-99-894-9283 | | |
| M | 8430-99-752-8650 | XXL | 8430-99-444-9493 | | |

# CBRN OVERBOOTS

## CHEMICAL PERMEATION DATA

workMaster™ by RESPIREX

| 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 |
| Anilinew | 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 | BREAKTHROUGH |
|---|---|---|---|---|
| Iso-butane | 75-28-5 | | EN374-3 | > 8 Hours |
| Iso-butane followed by Hyrdrofluoric 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 50% | 7664-93-9 | L | EN 16523 | > 8 Hours |
| **Sulphuric Acid 96%** | 7664-93-9 | | EN374-3 | > 8 Hours |
| Tetrachlororethylene | 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

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**WorkMaster™ is a division of Respirex International Limited**
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