



Personal Protection Equipment for Mold Remediation

The U.S. Occupational Safety and Health Administration (OSHA) has not set a Permissible Exposure Limit (PEL) for mold and does not provide detailed guidelines on personal protective equipment (PPE) that should be used. However OSHA does recommend an N95 respirator as the most basic personal protection. Additional guidelines are also provided by the Environmental Protection Agency (EPA).

This document seeks to provide basic guidance on PPE considerations for flood and disaster clean-up situations involving mold, including basic guidelines for Respiratory Protection derived from the Environmental Protection Agency’s Table 2 “Mold Remediation in Schools and Commercial Buildings”.

- Small area:** total surface area affected less than 10 square feet; minimum protection
- Medium area:** total surface area affected between 10 and 100 square feet; limited or full protection
- Large area:** total surface area greater than 100 square feet; full protection



	Minimum Protection (Small Area)	Limited Protection (Medium Area)	Full Protection (Large Area)
Respiratory Protection	N95 respirator	N95 respirator; mask with P100 filters	Full facepiece* respirator with P100 filters
Eye and Face Protection	Goggles / Eye Protection	Goggles / Eye Protection	*Full facepiece respirator will protect eyes and face
Body Protection	Gloves	Gloves and disposable overalls	Gloves, disposable overalls and foot covers

FAQs

Employers need to evaluate the worksite and be aware of all the other hazards that may be present. Honeywell's list of recommended protection includes respirators that provide chemical protection in addition to the particulate filters recommended by the EPA. In some cases a respirator providing a higher protection factor may also be desired.

For Respiratory protection in particular, some of the questions you need to consider are:

What other contaminants are present?

Lead, asbestos, organic vapors, acid gases - P100 class filter with a gas and/or vapor cartridge may be required. Higher concentrations may require a PAPR or continuous flow supplied air respirator (CF-SAR). Concentrations above 1000 times the PEL will require a pressure demand supplied airline respirator (PD-SAR) or Self-Contained Breathing Apparatus (SCBA).

Is there oil present in the atmosphere?

An R (Restricted to 8 hours use) or P (oil Proof – no restrictions) class filter is required.

Can some molds emit toxic vapors or gases that can make workers ill?

Yes, chemical cartridges may be needed.

What other chemicals are being introduced to scrub down the area?

EPA & CDC recommend a bleach solution - in which Acid Gas cartridges may be needed. If the area is poorly ventilated or if concentrations exceed 10 times the PEL for half masks and 50 times for full facepieces, a Powered Air Purifying Respirator (PAPR) or continuous flow supplied air respirator (CF-SAR) will be required. Concentrations above 1000 times the PEL will require a pressure demand supplied airline respirator (PD-SAR) or Self-Contained Breathing Apparatus (SCBA).

What if there are there large concentrations of mold in a poorly ventilated area?

Higher concentrations may require a PAPR or CF-SAR. Concentrations above 1000 times the PEL will require a PD-SAR or SCBA.

What is the best recommendation if the site concentrations are Immediately Dangerous to Life or Health (IDLH), or have the potential to become IDLH?

A PD-SAR with an escape cylinder or an SCBA is required.

Workers are exerting a lot of energy under hot, humid conditions, wearing nonporous clothing. A PAPR would increase worker comfort and productivity.



The following tables offer guidance on head-to-toe PPE for MINIMUM to HIGHEST risk mold remediation operations.

MINIMUM PROTECTION

Small area: Total surface area affected less than 10 square feet - minimum protection
 Exposure: Particulate only or any exposure to vapors and gases is below the PEL.

What to Wear?

Respirators: N95
 Eye Protection: Goggles
 Body Protection: Liquid proof gloves; Liquid proof boots; Disposable clothing

MINIMUM RESPIRATORY PROTECTION

Series	Order Number	Description	Protection
One-Fit HC-NB29F	14110451	Disposable flat fold for healthcare	N95
N1105	14110387	Disposable mask, size small	N95
N1105	14110388	Disposable mask, size medium	N95
N1105	14110389	Disposable mask, size large	N95
N1125	14110393	Disposable mask with exhalation valve, size small	N95
N1125	14110394	Disposable mask with exhalation valve, size medium	N95
N1125	14110395	Disposable mask with exhalation valve, size large	N95

MINIMUM EYE PROTECTION

Series	Order Number	Description	Protection
North A600 goggle	A610S	Economy splash goggle, clear AF lens	Impact / Splash
North V-Maxx goggle	11250810	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash
UVEX Strategy goggle	S3810	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash
UVEX Futura goggle	S345C	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash
UVEX Classic goggle	S360	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash



MINIMUM BODY PROTECTION

Series	Order Number	Description	Protection
Honeywell PowerCoat®	PSD-NI8-Size	Powder-free, 12 in, 8 mil, disposable nitrile glove - 50 pieces per box - Sizes S - 2XL)	Hand; chemical protection
Servus® CT™	18821/Size	PVC, 16 in (40.6 cm), black knee boot, " steel toe and Trac10™ sole design - EVA FootForm contour insole - Meets ASTM F2413 M I/75 C/75 Men's whole sizes 3-15	Foot; liquid and crush protection
Honeywell NorthGen Pro™	35596/Size	Coverall, disposable, NorthGen Pro, blue, knitted cuffs, elastic at ankles, hood and waist, storm flap, 5 units per bag, 20 units in a case - Sizes S - 4XL	Clothing; splash and dust

MEDIUM PROTECTION

Medium area: Total surface area affected less than 10 square feet - minimum protection
 Exposure: Higher concentrations of particulates from mold, plus possible exposure to vapors (e.g. organic vapors from mold or other decomposing substances) and gases (e.g. chlorine or other bleach compound used in clean-up)

What to Wear?

Respirators: Half masks with N95 or P100. Organic vapor and/or acid gas cartridges with P100 if needed
 Eye Protection: Goggles
 Body Protection: Liquid proof gloves; Liquid proof boots; Disposable clothing

MEDIUM RESPIRATORY PROTECTION

Series	Order Number	Description	Protection
North CFR-1	4200S, M, L	Half mask with N95 filters	N95
North 7700 Series	770030S, M, L	Half mask with P100 (7580P100) filter	P100
Survivair® 2000	B250000 (S) B260000 (M) B270000 (L)	Half mask with P100 (105005) filter	P100
North® 7700 Series	770030S, M, L	Half mask with organic vapor cartridge (7581P100L) and P100 filter	OV/P100
Survivair® 2000	B250000 (S) B260000 (M) B270000 (L)	Half mask with organic vapor cartridge (105110) and P100 filter	OV/P100
North® 7700 Series	770030S, M, L	Half mask with organic vapor/acid gas cartridge (7583P100L) and P100 filter	OVAG/P100
Survivair® 2000	B250000 (S) B260000 (M) B270000 (L)	Half mask with organic vapor/acid gas (105310) cartridge & P100 filter	OVAG/P100

MEDIUM EYE PROTECTION

Series	Order Number	Description	Protection
North A600 goggle	A610S	Economy splash goggle, clear AF lens	Impact / Splash
North V-Maxx goggle	11250810	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash
UVEX Strategy goggle	S3810	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash
UVEX Futura goggle	S345C	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash
UVEX Classic goggle	S360	Indirect vent goggle, clear AF lens, adjustable neoprene headband	Impact / Splash

MEDIUM BODY PROTECTION

Series	Order Number	Description	Protection
North® Nitri-Guard	LA102G	Nitrile gloves - green - 11 mil (0.28mm) - 13" (33cm) - unflocked - sizes: 7/S - 11/XXL - 12 pr/bag, 12 bag/cs	Hand; chemical protection
Servus® PRM™	75145C	PVC - 15 in (38.1 cm) – black/orange steel toe and steel midsole – removable cushion insole – ergonomic footbed - Meets ASTM F2413 M I/75 Men's whole sizes: 7 to 14 – 1 pr/bag – 6 pr/cs	Foot; liquid, crush and puncture protection
Honeywell NorthGen Pro™	35596/Size	Disposable coverall - blue, knitted cuffs, elastic at ankles, hood and waist, storm flap, 5 ea/bg, 20 ea/cs	Clothing; splash and dust

HIGH PROTECTION

Large area: Total surface area affected greater than 100 square feet - full protection

Exposure: Exposure to vapors (e.g. organic vapors from mold or other decomposing substances) and gases (e.g. chlorine or other bleach compound used in clean-up) in addition to particulates from mold.

What to Wear?

Respirators: Full facepiece with organic vapor &/or acid gas with P100

Eye Protection: Full facepiece respirator protects eyes and face

Body Protection: Liquid proof gloves; Liquid proof boots; Disposable clothing

HIGH RESPIRATORY PROTECTION

Series	Order Number	Description	Protection
North® 7600 Series	760008A, S	Full facepiece with P100 (7580P100) filter	P100
Survivair® Opti-Fit	752000 (S) 762000 (M) 772000 (L)	Full facepiece with P100 (105005) filter	P100
North® 7600 Series	760008A, S	Full facepiece with organic vapor (7581P100L) cartridge and P100 filter	OV/P100
Survivair® Opti-Fit	752000 (S) 762000 (M) 772000 (L)	Full Facepiece with organic vapor (105110) cartridge and P100 filter	OV/P100
North® 7600 Series	760008A, S	Full facepiece with organic vapor/acid gas (7583P100L) cartridge and P100 filter	OVAG/P100
Survivair® Opti-Fit	752000 (S) 762000 (M) 772000 (L)	Full facepiece with organic vapor/acid gas (105310) cartridge and P100 filter	OVAG/P100



HIGH BODY PROTECTION

Series	Order Number	Description	Protection
North® Nitri-Guard	LA172G/Size	Nitrile gloves - green - 17 mil (0.43mm) - 13" (33cm) - flock lined - sizes: 7/S - 11/XXL - 12 pr/bag, 12 bag/cs	Hand; chemical protection
Servus® Iron Duke	1880/Size	Polyblend – 15 in (38.1 cm) – Black knee boot – steel toe and extended ribbed steel shank – removable and washable ergonomic insoles Meets ASTM F2413 M I/75 C/75 Men's whole sizes: 5 - 13 – 1 pr/bag – 6 pr/cs	Foot; liquid and crush protection
Honeywell NorthGen Air™	85596/Size	Disposable coverall, white, knitted cuffs, elastic at ankles, hood and waist, storm flap, 5 ea/bag, 20 ea/cs Sizes: S - 4XL.	Clothing; splash and dust

HIGHER PROTECTION

Large area: Total surface area affected greater than 100 square feet - full protection

Exposure: Higher concentrations of particulates from mold, plus possible exposure to vapors (e.g. organic vapors from mold or other decomposing substances) and gases (e.g. chlorine or other bleach compound used in clean-up)

What to Wear?

Respirators: PAPR with High-Efficiency Particulate Air-Purifying (HEPA) filter, or organic vapor and acid gas with HEPA filter

Eye Protection: Full facepiece respirator protects eyes and face

Body Protection: Liquid proof gloves; Liquid proof boots; Disposable clothing

HIGHER RESPIRATORY PROTECTION

Series	Order Number	Description	Protection
Sperian® Opti-Fit	520500 (S) 520600 (M) 520700 (L)	Mask mounted Powered Air-Purifying Respirator (PAPR) with HEPA filter	HEPA filter
North® Compact Air 200 Series	CA201D	Belt mounted PAPR with OV/AG/HEPA (4003HE) cartridge filters	HEPA with OVAG

HIGHER BODY PROTECTION

Series	Order Number	Description	Protection
North® Nitri-Guard	LA258G/Size	Nitrile gloves - green - 25 mil (0.63mm) - 18" (45.7cm) - unflocked - sizes: 7/S - 11/XXL - 12 pr/bag, 12 bag/cs	Hand; chemical protection
Servus® Iron Duke	75101/Size	PVC PRO® – 15 in (38.1 cm) – Gray/Yellow/Black – steel toe and extended ribbed steel shank – removable and washable ergonomic insoles Meets ASTM F2413 M I/75 C/75 Men's whole sizes: 5 to 15 – 1 pr/bag – 6 pr/cs	Foot; liquid and crush protection
Honeywell NorthGen Air™	85596/Size	Disposable coverall, white, knitted cuffs, elastic at ankles, hood and waist, storm flap, 5 ea/bag, 20 ea/cs Sizes: S - 4XL.	Clothing; splash and dust



75101

HIGHEST PROTECTION

Confined space and poorly ventilated
 Exposure: Concentrations more than 1000 times the PEL; or where concentrations or contaminant(s) are unknown, or other potential IDLH atmosphere or confined space.

What to Wear?

Respirators: PD-SAR or SCBA. Hoses and couplings for PD-SAR are ordered separately
 Eye Protection: Full facepiece respirator protects eyes and face
 Body Protection: Liquid proof gloves; Liquid proof boots; Disposable clothing

HIGHEST RESPIRATORY PROTECTION

Series	Order Number	Description	Protection
Sperian® Panther Hip-Pak	P968455	PD-SAR with 5 minute escape cylinder	PD-SAR
Sperian® Cougar	888888	LP 30 minute SCBA with aluminum cylinder	SCBA
Sperian® Cougar	483121	LP 30 minute SCBA with carbon cylinder, SAR attachment	SCBA

HIGHEST BODY PROTECTION

Series	Order Number	Description	Protection
North® Nitri-Knit	NK803/Size	Nitrile gloves - dipped nitrile with interlock knitted liner - 12" (30cm) - rough grip - blue - sizes: 7 - 11 12 pr/bag, 12 bag/cs	Hand; chemical protection
Servus®	22214/Size	Neoprene III – 16 in (40.6 cm) – copper tan boot – steel toe – removable insoles – Chevron sole and heel Meets ASTM F2413 M I/75 C/75 Men's whole sizes: 3 to 15 - 1 pr/bag – 6 pr/cs	Foot; liquid and crush protection
Honeywell NorthGen Air™	85596/Size	Disposable coverall, white, knitted cuffs, elastic at ankles, hood and waist, storm flap, 5 ea/bag, 20 ea/cs Sizes: S - 4XL.	Clothing; splash and dust



P968455

Contact numbers for more
information:

Honeywell Technical Services
800.873.5242

Honeywell Customer Care

900 Douglas Pike
Smithfield, RI 02917
Telephone: 800.430.4110 USA

2000 Plainfield Pike
Cranston, RI 02921
Telephone: 800.430.4110

3001 South Susan Street
Santa Ana, CA 92704 USA
Telephone: 800.821.7236