

Safety, Respiratory Protection Systems



1. Scope

This standard covers the requirements for respiratory protection systems consisting of masks, respirators, and cartridges.

This standard applies to the Seattle City Light (SCL) stock numbers listed in Section 7.

2. Application

Respirators are designed to protect the wearer from inhaling particulate matter, including airborne microorganisms, fumes, vapors and gases.

Respirators range from single-use, disposable face masks to more robust reusable models with replaceable cartridges.

It is important to be properly fitted for the respirator to be effective. Reusable respirators may only be issued to personnel after approval and fit test conducted by a SCL Safety Health and Wellness specialist.

Each brand of reusable respirator requires the same brand of cartridges.

It is important to select the appropriate respirator cartridges and filters based on your specific application or environment.

Different cartridges are effective protection against specific particulates.

All filters are identified with National Institute for Occupational Safety and Health (NIOSH) Air Filter Ratings.

Standards Coordinator
Quan Wang

Standards Supervisor
John Shipek

Unit Director
Andrew Strong

The first part of a filter's classification uses the letters N, R, or P to indicate the filter's ability to function when exposed to petroleum.

"N" = not resistant to petroleum

"R" = somewhat resistant to petroleum

"P" = strongly resistant to petroleum

The second part lists the percentage of particles that the mask is certified to block (such as 95 or 97 percent).

The most common is N95, which is recommended by the US Centers for Disease Control and Prevention (CDC) for most cases of air contamination. These filters are designed to seal tightly around the mouth and nose and are made of material certified to block 95% of particles 0.3 µm or larger in diameter.

P100 rated particulate respirators are designed to help provide reliable respiratory protection of at least 99.97 percent filtration efficiency against certain oil and non-oil based particles. A carbon layer reduces exposure to nuisance levels of organic vapors such as solvents, degreasers, and resins.

P95 rated particulate respirators are designed to help provide reliable respiratory protection of at least 95 percent filtration efficiency against certain oil and non-oil based particles. A carbon layer reduces exposure to nuisance levels of organic vapors such as solvents, degreasers, and resins.

N100 rated particulate respirators are designed to help provide reliable respiratory protection of at least 99.97 percent filtration efficiency against certain non-oil based particles.

N95 rated particulate respirators are designed to help provide reliable respiratory protection of at least 95 percent filtration efficiency against certain non-oil based particles. This respirator is designed for use for particles such as those from grinding, sanding, sweeping, sawing, bagging, and other operations that create dust.

3. Industry Standards

Respiratory protection systems shall meet the requirements of the latest revision of the following industry standards:

OSHA 29 CFR 1910.134 – Respiratory Protection

42 CFR 84 – Approval of Respiratory Protective Devices

ANSI Z88.7; "Color Coding of Air-Purifying Respirator Canister, Cartridges, and Filters"

4. Markings

Cartridges and filters shall be marked according to ANSI/AIHA/ASSE Z88.7-2010.

Filters shall identify their effective National Institute for Occupational Safety and Health (NIOSH) Air Filter Ratings.

5. Packaging

Respirator protection system components shall be individually packaged and legibly marked with the following information:

- Manufacturer identification
- Product description
- SCL stock number

Each shipping container shall be legibly marked with the following information:

- Manufacturer identification
- Product description
- SCL purchase order number

6. Issuance

For units of issue see Section 7.

7. Approved Manufacturers

7.1 Respirators, Full- and Half-Face, Reusable

Description	"3M 7500 Series" half face, particulate respirator
Facepiece material	Silicon Rubber
Half mask suspension type	Standard, fabric cradle headband and elastic straps
Head harness material	Thermoplastic elastomer, polyester, polyurethane
Cartridges included	No
Disposables/ reusable	Reusable
Respirator connection type	Bayonet
Configured for	Dual cartridge
Inhalation valves	Two
Exhalation valve	One
Typical application	Asbestos abatement, painting, grinding, sanding, welding
Respirator color	Blue-gray
Issuance	EA

Stock No.	Size	Manufacturer	Catalog No.
014762	S	3M	7501
014763	M	3M	7502
014764	L	3M	7503



Description	"Ultimate FX 400 Series" Full face, particulate respirator		
Facepiece material	Silicone Rubber		
Full Face mask suspension type	Standard, cradle headband and elastic straps		
Head harness	6-point Head Harness, Silicone Rubber with Nylon Buckles		
Cartridges included	No		
Disposables/ reusable	Reusable		
Respirator connection type	Bayonet		
Configured for	Dual cartridge		
Inhalation valves	Two		
Exhalation valve	One		
Typical application	Assembly and Mechanical, Cleaning, Facility Maintenance, Painting		
Respirator Color	Black		
Lens Material	Polycarbonate, Scotchgard coating		
Lens Rating	ANSI Z87.1		
Issuance	EA		
Stock No.	Size	Manufacturer	Catalog No.
014765	M	3M	FF-402
014766	L	3M	FF-403



Description	"7700 Series" half face, particulate respirator		
Facepiece material	Silicone		
Half mask suspension type	Standard, cradle headband and elastic straps		
Head harness material	Elastic, polyester, polypropylene		
Cartridges included	No		
Disposables/ reusable	Reusable		
Respirator connection type	Threaded		
Configured for	Dual cartridge		
Inhalation valves	Two		
Exhalation valve	One		
Typical application	Chemical, manufacturing, steel and metals		
Issuance	EA		
Stock No.	Size	Manufacturer	Catalog No.
110450	S	Honeywell - North	770030S
110451	M	Honeywell - North	770030M
110452	L	Honeywell - North	770030L



Description	"7600 Series" Full face, particulate respirator
Facepiece material	Silicone Rubber
Full Face mask suspension type	Standard, cradle headband and elastic straps
Head harness	5-point Head Harness, Neoprene
Cartridges included	No
Disposables/ reusable	Reusable
Respirator connection type	Threaded
Configured for	Dual cartridge
Inhalation valves	Two
Exhalation valve	One
Typical application	Assembly and Mechanical, Cleaning, Facility Maintenance, Painting
Respirator Color	Black
Lens Material	Polycarbonate
Lens Field of Vision	200 degrees
Issuance	EA



Stock No.	Size	Manufacturer	Catalog No.
014770	M/L	Honeywell – North	76008A

7.2 Respirators, Disposable

Stock No.	010079
Description	Disposable particulate respirator
Aerosol type	Oil and non-oil
NIOSH rating	P95
Exhalation valve	Yes
Nuisance odor relief	Organic vapors
Disposable	Yes
Product type	Nuisance level organic vapors
Respirator shape	Molded cup
Adjustable M nose clip	Yes
Face seal	None
Respirator head strap	Dual, non-adjustable
Manufacturer	3M
Catalog No.	8577 P95
Package quantity	10 per box
Issuance	EA









Stock No.	010078
Description	Disposable particulate respirator
Aerosol type	Oil and non-oil
NIOSH rating	N100
Exhalation valve	Yes
Nuisance odor relief	None
Disposable	Yes
Product type	Dust and other particles
Respirator shape	Molded cup
Adjustable M nose clip	Yes
Face seal	Yes
Respirator head strap	Dual, adjustable
Manufacturer	3M
Catalog No.	8233 N100
Package quantity	1 per bag, 20 bags per case
Issuance	EA



Stock No.	110141
Description	Disposable particulate respirator
Aerosol type	Non-oil
NIOSH rating	N95
Exhalation valve	No
Nuisance odor relief	No
Disposable	Yes
Product type	Dust and other particles
Respirator shape	Molded cup
Adjustable M nose clip	Yes
Face seal	None
Respirator head strap	Dual, non-adjustable
Manufacturer/ Catalog No.	
3M	8210 N95
Gerson	1730 N95
Package quantity	20 per box
Issuance	EA



7.3 Replacement Cartridges

Stock No.	Description	Manufacturer Catalog No.		Pkg. Quantity	
		3M	Honeywell - North		
110460	<ul style="list-style-type: none"> ▪ P100 particulate filter for all particulates ▪ Color: magenta ▪ Issuance: PR 	–	7580P100	2 per pack (5 packs per box).	
110461	<ul style="list-style-type: none"> ▪ Organic vapor cartridge ▪ Color: black ▪ Issuance: PR 	–	N75001	2 per pack	
110462	<ul style="list-style-type: none"> ▪ Organic vapor and acid gas cartridge with a P100 particulate filter for all particulates ▪ Color: Magenta/yellow ▪ Issuance: PR 	–	7583P100	2 per pack	
014767	<ul style="list-style-type: none"> ▪ P100 particulate filter for all particulates ▪ Connection type: bayonet ▪ Color: magenta ▪ Issuance: PR 	7093	–	4 per pack (3 packs per carton).	
014768	<ul style="list-style-type: none"> ▪ Organic vapor cartridge ▪ Low profile ▪ Connection type: bayonet ▪ Color black ▪ Issuance: PR 	6001	–	2 per pack	
014769	<ul style="list-style-type: none"> ▪ Multi gas/vapor cartridge with a P100 particulate filter for all particulates ▪ Connection Type: Bayonet ▪ Color: magenta/yellow ▪ Issuance: PR 	60926	–	2 per pack	

8. Sources

Brown, Kathryn; SCL Safety and Health Specialist and subject matter expert for 4009.15

<https://www.3m.com/>

<https://us.msasafety.com/>

<https://safety.honeywell.com/en-us>

Wang, Quan; SCL Standards Engineer and originator of 4009.15