

## 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.

Standard Coordinator  
Laura Vanderpool

Standards Engineering Supervisor  
Brett Hanson

Division Director  
Bob Risch

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.

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### 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"

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### 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

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

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



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



Stock No.	Size	Manufacturer	Catalog No.
014765	M	3M	FF-402
014766	L	3M	FF-403

<b>Description</b>	"7700 Series" half face, particulate respirator
<b>Facepiece material</b>	Silicone
<b>Half mask suspension type</b>	Standard, cradle headband and elastic straps
<b>Head harness material</b>	Elastic, polyester, polypropylene
<b>Cartridges included</b>	No
<b>Disposables/ reusable</b>	Reusable
<b>Respirator connection type</b>	Threaded
<b>Configured for</b>	Dual cartridge
<b>Inhalation valves</b>	Two
<b>Exhalation valve</b>	One
<b>Typical application</b>	Chemical, manufacturing, steel and metals
<b>Issuance</b>	EA



Stock No.	Size	Manufacturer	Catalog No.
110450	S	Honeywell - North	770030S
110451	M	Honeywell - North	770030M
110452	L	Honeywell - North	770030L

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



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

## 7.2 Respirators, Disposable

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









<b>Stock No.</b>	<b>010078</b>
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





<b>Stock No.</b>	<b>110141</b>
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"> <li>▪ P100 particulate filter for all particulates</li> <li>▪ Color: magenta</li> <li>▪ Issuance: PR</li> </ul>	–	7580P100	2 per pack (5 packs per box).	
110461	<ul style="list-style-type: none"> <li>▪ Organic vapor cartridge with a P100 particulate filter for all particulates</li> <li>▪ Color: pink/black sticker</li> <li>▪ Issuance: PR</li> </ul>	–	7581P100L	2 per pack	
110462	<ul style="list-style-type: none"> <li>▪ Organic vapor and acid gas cartridge with a P100 particulate filter for all particulates</li> <li>▪ Color: magenta/yellow sticker</li> <li>▪ Issuance: PR</li> </ul>	–	7583P100	2 per pack	
014767	<ul style="list-style-type: none"> <li>▪ P100 particulate filter for all particulates</li> <li>▪ Connection type: bayonet</li> <li>▪ Color: gray/purple sticker</li> <li>▪ Issuance: PR</li> </ul>	7093	–	4 per pack (3 packs per carton).	
014768	<ul style="list-style-type: none"> <li>▪ Organic vapor cartridge with a P100 particulate filter for all particulates</li> <li>▪ Connection type: bayonet</li> <li>▪ Color magenta</li> <li>▪ Issuance: PR</li> </ul>	60921	–	2 per pack	
014769	<ul style="list-style-type: none"> <li>▪ Multi gas/vapor cartridge with a P100 particulate filter for all particulates</li> <li>▪ Connection type: bayonet</li> <li>▪ Color: magenta/yellow</li> <li>▪ Issuance: PR</li> </ul>	60926	–	2 per pack	

## 7.4 Lens Protectors

Stock No.	Description	Manufacturer Catalog No.		Pkg. Quantity	
		3M	Honeywell/North		
014943	<ul style="list-style-type: none"><li>Peel-away cover lens for use with Honeywell 7600 Series full-face particulate respirator (Stock No. 014770)</li><li>Color: clear</li><li>Issuance: EA</li></ul>	–	80836A	3 sheets per 5 sets/pack	
014944	<ul style="list-style-type: none"><li>Semi-permanent lens protector for 3M Ultimate FX 400 Series respirators (Stock Nos. 014765 and 014766)</li><li>Scotchgard coating</li><li>Disposable; designed for temporary use</li><li>Adhesive seal around perimeter of lens to form a barrier against debris</li><li>Issuance: EA</li></ul>	FF-400-17	–		

## 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