

Technical Datasheet



3M™ C100 Series Particulate Respirators

Description

The 3M™ C100 Series Particulate Respirators provide effective respiratory protection for use in environments where workers will be exposed to airborne dust particles and non-volatile liquid particles.

- Tested and CE Approved to EN 149:2001+A1:2009.
- Traditional convex shape, with nose clip and twin strap design.
- Durable, collapse resistant inner shell.
- Reliable, effective protection against fine particles.
- Exhalation valve offers improved comfort in hot humid environments and/or where work is hard and physical*.

*C111 and C112 models only

Approvals

These products meet requirements of the European Community Directive 89/686/EEC (Personal Protective Equipment Directive) and is thus CE marked. Certification under Article 10, EC Type-Examination, has been issued for this product by INSPEC International Limited, 56 Leslie Hough Way, Salford, Greater Manchester M6 6AJ, UK (Notified Body number 0194). Certification under Article 11, EC quality control, has been issued by BSI Product Services (Notified Body number 0086).

Standards

These products meet the requirements of recently amended European Standard EN 149:2001 + A1:2009, filtering facepiece respirators for use against particles. They should be used to protect the wearer from solid and non-volatile liquid particles only.

Products are classified by filtering efficiency and maximum total inward leakage performance (FFP1, FFP2 and FFP3), also by usability and clogging resistance.

Performance tests in this standard include filter penetration; extended exposure (loading) test; flammability; breathing resistance and total inward leakage. Reusable products are also subjected to cleaning, storage and mandatory clogging resistance tests (clogging is optional for non reusable products). A full copy of EN 149:2001+A1:2009 can be purchased from your national standards body.

Designations:

R = Reusable

NR = Non reusable (single shift use only)

D = Meets the clogging resistance requirements

Applications

These respirators are suitable for use in concentrations of solid and non-volatile liquid particles up to the following limits:

Model	EN 149+A1 Classification	Exhalation Valve	Threshold Limit Value, TLV
C101	FFP1 NR D	Unvalved	4
C111	FFP1 NR D	Valved	4
C102	FFP2 NR D	Unvalved	12
C112	FFP2 NR D	Valved	12

Respiratory protection is only effective if it is correctly selected, fitted and worn throughout the time when the wearer is exposed to hazards.



Selection Guide

		FFP1	FFP2
Painting, Varnishing, Spraying, Coating, Mixing	Solvent-Based - brush / roller applied		
	Solvent-Based - spray applied	Ask 3M	
	Water-Based - brush / roller / spray applied		
	Wood Preservatives		
	Powder Coating		
Sanding, Stripping, Grinding, Cutting, Drilling	Rust, most Metals, Filler, Concrete, Stone	•	
	Cement, Wood, Steel,		•
	Paints, Varnish, Anti-rust coating		•
	Stainless Steel, Anti-fouling varnish		
	Resins, Reinforced plastics (carbon / glass fibre)		•
Construction / Maintenance	Scabbling, Shot-creting (concrete dust)	•	•
	Plastering, Rendering, Cement mixing	•	•
	Demolition	•	•
	Groundwork, Earth moving, Piling, Underpinning		•
	Spray foam, Loft Insulation		•
Metal working / Foundries	Welding, Soldering		•
	Electro-plating		•
	Finishing, Slotting, Drilling, Riveting, Machining		•
	Oxyacetylene cutting		•
	Molten metal handling, Smelting		•
Cleaning / Waste Removal	Disinfection, Cleaning		•
	Waste removal		•
	Asbestos handling		
	Asbestos removal	Ask 3M	
Allergens / Biohazards	Pollen, Animal dander	•	
	Mould / Fungus, Bacteria**, Viruses		•
	**Tuberculosis		
	Diesel exhaust / Smoke		•
Agriculture / Forestry	Handling infected animals, Culling		•
	Feeding livestock, Cleaning sheds / harvesters	•	•
	Straw chopping, Composting, Harvesting		•
	Pesticides, Insecticides (crop spraying)		•
Mining / Quarrying	Tunnelling, Drilling, Grinding, Excavation		•
	Pumping, Dredging, Washing		•
	Cutting, Sawing		•
	Changing Filters		•
Other Industrial Applications	Inks, Dyes, Solvents, Chemicals		•
	Powdered Additives / Chemicals		•
	Pharmaceuticals		•
	Rubber / Plastics processing		•
	Oil and Gas Extraction / Processing		•
	Pottery, Ceramics		
	Wood / Paper Mills		•

This selection guide is only an outline designed to focus on products which may be appropriate for typical applications - it should not be used as the only means of selecting a product. Selection of the most appropriate personal protective equipment (PPE) will depend on the particular situation and should be made only by a competent person knowledgeable of the assessed risks, actual working conditions and limitations of PPE. Details regarding performance and limitations are set out on the product packaging and user information. If in doubt, contact a safety professional or 3M.

For respiratory training and advice please contact your local 3M representative.

Materials

The following materials are used in the production of the C100 Series Particulate Respirators:

Component	Material
Straps	Polyisoprene
Staples	Steel
Nose Foam	Polyurethane
Nose Clip	Aluminium
Filter	Polypropylene
Valve*	Polypropylene
Valve diaphragm	Polyisoprene

These products do not contain components made from natural rubber latex.

Maximum mass of products

- Unvalved (C101 & C102) = 10g
- Valved (C111 & C112) = 14g

*C111 and C112 models only

Fitting Instructions

See Figure 1.

1. Cup respirator in one hand with nosepiece at fingertips, allow headbands to hang freely below hand.
2. Hold respirator under chin, with noseclip up.
3. Locate the upper strap across the crown of the head and the lower strap below the ears.
4. Straps must not be twisted.
5. Using both hands, mould noseclip to the shape of the nose to ensure a close fit and good seal. Pinching the noseclip using only one hand may result in less effective respirator performance.
6. The seal of the respirator on the face should be fit-checked before entering the workplace.

Figure 1



Fit Check

1. Cover the front of the respirator with both hands being careful not to disturb the fit of the respirator.
2. (a) UNVALVED respirator - EXHALE sharply;
(b) VALVED respirator - INHALE sharply.
3. If air leaks around the nose, re-adjust the noseclip to eliminate leakage. Repeat the above fit check.
4. If air leaks at the respirator edges, work the straps back along the sides of the head to eliminate leakage. Repeat the above fit check.

If you CANNOT achieve a proper fit DO NOT enter the hazardous area. See your supervisor.

Users should be fit tested in accordance with national requirements. For information regarding fit testing procedures, please contact 3M.

Product Range



C101 respirator

C102 respirator

C111 respirator

C112 respirator

Storage and Transportation

The 3M™ 8000 Series Particulate Respirators have a shelf life of 5 years. End of shelf life is marked on the product packaging. Before initial use, always check that the product is within the stated shelf life (use by date). Product should be stored in clean, dry conditions within the temperature range: – 20°C to + 25°C with a maximum relative humidity of <80%. When storing or transporting this product use original packaging provided.

Disposal

Contaminated products should be disposed as hazardous waste in accordance with national regulations.

Warnings and Limitations

- Always be sure that the complete product is:
 - Suitable for the application;
 - Fitted correctly;
 - Worn during all periods of exposure;
 - Replaced when necessary.
 - Proper selection, training, use and appropriate maintenance are essential in order for the product to help protect the wearer from certain airborne contaminants.
 - Failure to follow all instructions on the use of these respiratory protection products and/or failure to properly wear the complete product during all periods of exposure may adversely affect the wearer's health, lead to severe or life threatening illness or permanent disability.
 - For suitability and proper use follow local regulations and refer to all information supplied. For more information contact a safety professional/3M representative.
- Before use, the wearer must be trained in use of the complete product in accordance with applicable Health and Safety standards/guidance.
 - These products do not contain components made from natural rubber latex.
 - These products do not protect against gases/vapours.
 - Do not use in atmospheres containing less than 19.5% oxygen. (3M definition. Individual countries may apply their own limits on oxygen deficiency. Seek advice if in doubt).
 - Do not use for respiratory protection against atmospheric contaminants/concentrations which are unknown or immediately dangerous to life and health (IDLH).
 - **Do not use with beards or other facial hair that may inhibit contact between the face and the product thus preventing a good seal.**
 - Leave the contaminated area immediately if:
 - a. Breathing becomes difficult.
 - b. Dizziness or other distress occurs.
 - c. The respirator becomes damaged
 - d. You taste or smell contaminants, or an irritation occurs
 - Discard and replace the respirator if it becomes damaged, breathing resistance becomes excessive or at the end of the shift.
 - Do not alter, modify, clean or repair this respirator.
 - In case of intended use in explosive atmospheres, contact 3M.
 - Before initial use, always check that the product is within the stated shelf life (use by date).

Important Notice

3M does not accept liability of any kind, be it direct or consequential (including, but not limited to, loss of profits, business and/or goodwill) arising from reliance upon any information herein provided by 3M. The user is responsible for determining the suitability of the products for their intended use. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence.



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17437