SAFETY FOCUS: DUST MASKS

Guidance for Restoration Groups





INLAND WATERWAYS ASSOCIATION

SAFETY FOCUS: DUST MASKS

Dust Masks protect workers against airborne particles including dust and powders. They are used commonly across a number of industries, including construction, agricultural, and pharmaceuticals. Commonly a requirement on restoration sites, dust masks are needed for a number of tasks, including: cement mixing, carpentry, drilling or cutting.

TYPES OF DUST MASKS

The Health & Safety Executive (HSE) designates three ratings for dust masks under EN 149 standards. Each rating offers varying levels of protection depending for different workplaces. Dust masks are designated under these three ratings:

FPP1: Protection against low levels of dust, as well as solid and liquid aerosols. These dust masks offer protections up to 4x Occupational Exposure Limits (OEL) or 4x Assigned Protection Factor (APF). Commonly suitable for drilling, cutting, sanding or carpentry.



FPP2: Protection against moderate levels of dust, as well as solid and liquid aerosols. These dust masks offer protections up to 12x OEL or 4x APF. Commonly suitable for plastering and sanding

FPP3: Protection against moderate levels of dust, as well as solid and liquid aerosols. These dust masks offer protections up to 50x OEL or 20x APF. Commonly suitable mixing lime mortar and cement.

Once the level of contaminants has been identified based on the workplace, you will be able to choose to appropriate dust mask.



FITTING DUST MASKS

Without ensuring a proper fit for the dust mask, it's almost a pointless exercise wearing one. In a recent review of restoration site across the country it was identified that mask were not fitted correctly. The following section is not an attempt to be patronising, but to demonstrate the proper way to fit a mask, to ensure all wearers are effectively protected against harmful particulates.

The following points show the correct method of fitting a mask:



Hold the respirator in one hand and separate the edges to fully open it with the other hand.

Bend the nose wire (where present) at the top of the respirator to form a gentle curve.



Mould the nosepiece across the bridge of your nose by firmly pressing down with your fingers until you have a good facial fit. If a good fit cannot be achieved, try another size or design of the dust mask



Turn the respirator upside down to expose the two headbands, and then separate them using your index finger and thumb.

Hold the headbands with your index finger and thumb and cup the respirator under your chin.



Position the upper headband on the crown of your head, above the ears, not over them. Position the lower strap at the back of your head below your ears.



Ensure that the respirator is flat against your cheeks.

TESTING DUST MASK FIT

There are two types of test that can be conducted to test is a dust mask is fitted correctly.

- 1) On site test can be completed during site briefings, before entering a site or on the job.
- 2) Fit Test Kit This required a fit test kit, generally containing a test hood, nebulizer, and two solutions for testing.

ON SITE TEST

• Cover the front of the respirator with both hands, being careful not to disturb the position of the respirator on the face. For an unvalved product – exhale sharply; for a valved product – inhale sharply.

• If air flows around the nose, readjust the nosepiece; if air flows around the edges of the respirator, readjust the headbands.



- A successful fit check is when there is no air leaking from the edges of the respirator. Always perform a fit check before entering the work area.
- If a successful fit check cannot be achieved, remove and refit the respirator.
- If you still cannot obtain a successful fit check, do not enter the work area.

FIT TEST KIT:

STEP 1: PREPARATION

The wear should not eat or drink (except water) 15 minutes prior to test. The nebuliser is then filled with the correct solutions based on the test (see step 2 or 3). The test hood is placed over the participants head and the test begins.

STEP 2: SENSITIVITY TEST

This is to check the wearer can taste the aerosol within the solutions.

10 Sprays – High Sensitivity 20 Sprays – Medium Sensitivity 30 Sprays – Low Sensitivity 30+ = not suitable test

Once detected the appropriate amount of squeezes will be applied in the next nest

STEP 3: FIT TEST

Wearing the appropriate dust mask the wearer is asked to put the hood back on.

Depending on the sensitivity test the wearer will be subjected to the max amount of spray for where they were categorised.

The wearer will subjected to a variety of movements/tests, including bending over, talking and shaking head.

If they can taste the spray at any time during the mask was not suitable in some way and the test it is a fail.

COMMON REASONS FOR FAILING!

There are a number of reasons why a dust mask may fail the test here are the most common reasons:

- 1. Incorrect Fitting
- 2. Trapped Hair
- 3. Sweating, Make Up, face cream & Jewellery
- 4. Mask Defects
- 5. Facial Hair
- 6. Unusual facial features! (scars, chin, depressions, nose shape, face type)

THE ELEPHANT IN THE ROOM – FACIAL HAIR

As you may be aware, some of your volunteers may have a beard! The Health and Safety Executive notes that Facial hair - stubble and beards - make it impossible to get a good seal of the mask to the face. If you are clean-shaven when wearing tight-fitting masks (ie those which rely on a good seal to the face), this will help prevent leakage of contaminated air around the edges of the mask and into your lungs. You will therefore be breathing in clean air, which will help you stay healthy. Those undertaking operations requiring respiratory equipment should be clean shaven to maximise the effectiveness of the mask. However alternative forms of respiratory equipment is available for those wishing to maintain their beard.



USEFUL LINKS

• HSE Fit testing Basics

http://www.hse.gov.uk/respiratory-protective-equipment/fit-testing-basics.htm

Photos: Thank you to WRG volunteers for providing photos and to Chesterfield Canal Trust for the image of Staveley Lock. Registered office: Island House, Moor Road, Chesham HP5 1WA Tel: 01494 783453. The Inland Waterways Association is a non-profit distributing company limited by guarantee. Registered in England No. 612245. Registered as a charity 212342

