

Guidance Note, GN020

## A CHECKLIST FOR RESPIRATORY PROTECTIVE EQUIPMENT (OR FACEMASKS)

Respiratory Protective Equipment (or RPE for short) is a term used to describe respirators or facemasks which protect the wearer from hazardous airborne substances such as dusts and vapours which could cause health problems if inhaled.

Below are some examples of types of RPE



If the correct RPE is selected, if it fits properly to the user's face and if it is looked after carefully, it will provide the necessary protection. However if the wrong type is chosen, or if it does not seal to the user's face or if there is a failure to store it correctly or maintain it, then the RPE could provide little or no protection.

**The following checklist should be used by Schools and Support Services wherever RPE is provided for use by member of staff or by students.**

### SHOULD RPE BE USED?

1) RPE should be used only when it is not reasonable to control exposure of the hazardous substance by other means. The "other means" are controls such as use of a fume cupboard or other form of local exhaust ventilation. In addition, always consider if the substance could be provided in a different physical form. For example using granules or tablets instead of a powder would greatly reduce the amount of airborne dust. Purchasing made-up solutions instead of making-up your own can also reduce or eliminate exposures. Also remember a point which should be obvious but which is often forgotten: RPE protects only the wearer. Consider others in the room or nearby who are not wearing RPE. What are they being exposed to by the activities of the person who is wearing the RPE?

### SELECTION OF RPE

2) There is a wide range of RPE for many different applications. Rather than providing detailed guidance on the selection of RPE, it is recommended that the University Safety Advisers be consulted for advice whenever RPE is needed for a new activity. Do not assume that RPE which has been purchased for a particular application (for example where protection against dust is required) will be suitable of another application (for example where protection against a different type of dust or a volatile chemical is needed).

### FACE FIT TESTING

3) Where RPE is used to protect the wearer from inhalation of a hazardous substance, it must be fit tested to confirm it provides a tight fit to the wearer's face. If there is not a tight fit, there could be leakage of airborne contaminants which will then be inhaled by the user.

Even a slight leak can greatly reduce the protection afforded by the RPE. Face fit testing of RPE is not optional. It is a legal requirement.

4) Fit testing can be carried out by several companies in Aberdeen which specialise in providing this service. Advice on which companies should be used for fit testing can be obtained from the University Safety Advisers. In essence, a test involves the wearer putting on the RPE, harmless airborne particles are introduced into the space on the outside of the mask and the tester checks the extent of penetration to the inside of the mask. There are a number of different techniques for doing this. When booking tests you should ask for quantitative tests (using equipment such as a particle counting device which provides a numerical measure of the fit) unless the test provider considers that qualitative tests (using the taste-test method) are more appropriate for the type of face mask.

5) University staff/students who undergo face fit testing should have a repeat test if there are significant changes to the shape of the face; for example, if they undergo any substantial dental work or develop facial changes such as scars or moles around the face seal area. Regardless of this, face fit tests should be repeated every 5 years. When face fit tests are booked, the test provider should be told that certificates of test should be issued with a validity of 5 years. (Some companies have, in the past, issued certificates which show a validity of 2 years. These can be regarded as having a validity of 5 years from the date of test.)

6) Any facial hair such as beard, stubble or moustache in the region where the RPE seals to the face will cause leakage and will result in failure of the fit test. It might be possible to provide those with facial hair with an alternative type of RPE which does not rely on a tight seal to the face.

For example:



#### STORAGE AND MAINTENANCE

7) All RPE must be checked for correct functioning before each use. The RPE manufacturer's guidance should be followed.

8) Disposable RPE (or single use RPE) is intended to be used for no more than one day. It should be thrown away after use. It should not be kept for use on a subsequent day.

9) RPE which is intended for reuse must be stored in a manner in which it will be free from contamination. If the inner surface of the RPE becomes contaminated, the wearer will inhale the contamination next time the RPE is worn.

10) RPE which is intended for reuse must be maintained, examined and tested at least once per month. Records must be kept.

#### TRAINING

- 11) Wearers of RPE must be trained in the following
- Why RPE is needed;
  - The protection afforded and the limitations of that protection;
  - Why formal face fit testing is required;
  - How to wear it and check it each time it is used;
  - How to clean it and where to store it (for reusable RPE);
  - What maintenance is required and when (for reusable RPE).

Contact the University Safety Advisers for further advice and assistance.