

# ERMIN plant

We now offer Quantitative Face Fit testing  
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## Test Objective

A Quantitative test measures the adequacy of a respirator's fit by numerically measuring the amount of leakage into the respirator. The Porta Count equipment works by measuring the concentration of microscopic dust particles in the ambient air and then measuring the concentration of those dust particles that leak into the respirator. The ratio of these two concentrations is called the fit factor. The filters stop essentially all the particles so anything that gets into the mask must have come through the face seal. A quantitative fit test is not affected by the person's sense of smell, taste or sensitivity to irritant chemicals.

## The Delegates

Wearers Must be clean shaven. Moustaches / Goatees are permitted if they do not contact the face seal area of the mask.  
Wearers must refrain from Smoking, eating and drinking 30 minutes before the test.



MAXIMIZING  
SAFETY  
WITH QUANTITATIVE  
FIT TESTING

PORTACOUNT® RESPIRATOR FIT TESTER



### Fit2Fit Accreditation

It is a legal requirement that workers using tight fitting respiratory protective equipment (face pieces/masks) must be fit tested by a competent person. This requirement is detailed in CoSHH regulations.

Are you sure that the RPE you provide to your employees fits them properly? Are you sure the face fit test was carried out competently? You ought to be, because the health of your employees could be at serious risk.

Recent research indicates that up to 50% of all RPE used does not offer the wearer the level of protection assumed and one of the major reasons is that it simply does not fit! Yet, under the regulations RPE must be correctly selected and this includes, for many types of RPE, a face piece Fit Test conducted by a competent person. So how can you be sure the person conducting the fit test is competent?

In view of these major concerns the British Safety Industry Federation, along with the HSE and other industry stakeholders have developed a competency scheme for Fit Test Providers. The Fit2Fit RPE Fit Test Providers Accreditation Scheme is designed to confirm the competency of any person performing face piece fit testing. Follow the useful links and downloads on this website to find out more.



important statement from the HSE

3M



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## **Quantitative RPE Face Fit Testing**

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### **The Delegates**

Wearers **MUST** be clean shaven. Moustaches / Goatees are permitted if they do not contact the face seal area of the mask. Wearers must refrain from smoking, eating and drinking 30 minutes before the test.

If any other PPE Equipment is worn with the respirator that could affect the fit e.g. Goggles/ Ear Defenders/ Safety Helmet they will be needed for the Face Fit test.

Test Length is approximately 15 minutes per person. Up to 4 persons can be tested per hour.

A series of basic exercises wearing the mask will need to be completed to test the fit.

Please let us know the make, model and size of the respirator that you wish to be tested on to ensure that we have the fittings ready for the test. If you bringing your own mask for testing it will need to be fitted with a particulate filter (P3).

### **Test Aims**

The performance of tight-fitting face pieces depends on achieving a good contact between the wearer's skin and the face seal of the face piece. People's faces vary significantly in shape and size, so it is unlikely that one particular type, or size of RPE face piece, will fit everyone. Inadequate fit will significantly reduce the protection provided to the wearer.

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## Face Fit and Facial Hair

### Is facial hair permitted?

No. When wearing, or being tested on, a tight or close fitting face mask, facial hair is not permitted in the face seal area.

Facial hair will force the mask seal away from the face and allow contaminants into the mask. This is the same both during a fit test and when wearing the mask for work.

### How do you define facial hair / what does clean shaven actually mean?

Facial hair grows at different rates and therefore it is unreasonable to give a time limit on how long a person can go between shaves. An older version of HSG 53 stated that a beard was defined as more than 24 hours growth - however this statement is not included in the current version and would not be appropriate for many individuals.

Clean shaven should be defined as smooth. A person's face should be smooth (i.e. no detectable facial hair or stubble) in the area where the seal meets the skin.

Small moustaches and goatee beards are permitted providing that they do not meet or interfere with the seal. 3M gives some great guidance in this in their 'Movember' promotional video.

### Why is facial hair not permitted?

In 2015 the HSL carried out a study on the effect that facial hair growth had on face fit test results. A number of subjects were asked not to shave for a seven-day period, during which they were tested, each day, on a number of different masks.

The results showed that the effect of stubble/growth on level of protection was quite specific to the mask/wearer combination. Protection could be significantly reduced where stubble was present, beginning within 24 hours from shaving, and generally worsening as facial hair grew.

Statistical analysis predicted this could reach an unacceptable level for all of the masks tested.

While some individual wearers did grow some stubble without significantly reducing protection with some masks, this was unpredictable, and it would not be practical to conduct the necessary testing to confirm this for every individual wearer.

The current guidance advising being clean-shaven in the area of the mask seal was deemed to be justified. The full report can be found on the HSE website.

### Why can't the fit test prove/disprove if facial hair makes a difference?

Although there are some fit test providers that will carry out a test on a person with facial hair - this is not permitted under the HSE fit testing protocol OC 282/28 or the guidance given by Fit2Fit. OC 282/28 states in its guidance to fit testers,

*"You should not conduct the fit test if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, moustache, sideburns or low hairline which cross the respirator sealing surface."*

A competent and reputable fit tester will refuse to test a wearer with any facial hair or stubble.

## What are the alternatives?

Where beards are worn for religious purposes or there are other valid reasons for a person not being able to shave or wear a close-fitting mask, then employers should provide an alternative. Powered respirators with either a hood or visor (pictured below) may be a good alternative to filtering half masks, however, these are not suitable for all applications.



## Sources of further information

The HSE document, 'INDG 460, Is Your Mask Protecting You?' has some useful tips for wearers. The HSE document, 'HSG 53, Respiratory Protective Equipment at Work', gives guidance on the selection and use of RPE.

The following information page contains news, legal requirements and free downloads - [www.csts.co.uk/face-fit-explained/](http://www.csts.co.uk/face-fit-explained/)