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Topic: Control of Welding Fume.

Applicability: UK Only

Date of Issue: 28 February 2019

In February 2019, the UK Health and Safety Executive (HSE) issued a safety bulletin about the change in enforcement expectations for control of welding fume.[1] All welding fume (including mild steel) is now classed as a carcinogen which can cause lung cancer and has the potential to cause kidney cancer. This is based on the outcome of recently published research by the International Agency for Research on Cancer (IARC).[2]

Consequently, there's a strengthening of the HSE's enforcement expectation for exposure control for all welding fume including mild and stainless steels, high chrome steels, armour plating and exotic metals.

Exposure to some welding fumes may cause metal fume fever, the most common cause is from welding galvanised steels but may also occur in metals with higher copper, cadmium and zinc content. The expectation level of exposure control now includes local exhaust ventilation (LEV) and the use of suitable respiratory protective equipment (RPE).

The following controls need to be considered, regardless of duration:

- the provision of suitable engineering controls e.g. LEV for all welding fume inside, with RPE for any residual fume; and
- the provision of suitable RPE for welding outdoors.

Welders must also be suitably instructed and trained in the use of these controls. Implementation of RPE should be completed through a managed RPE programme, to ensure adequate and suitable selection including face fit testing (where appropriate), inspection, maintenance, cleaning and storage.

The HSE have specific guidance on their website which outlines control measures to consider when welding in a variety of environments, in all cases when RPE is required a minimum Assigned Protection Factor (APF) of 20 is outlined.[3]

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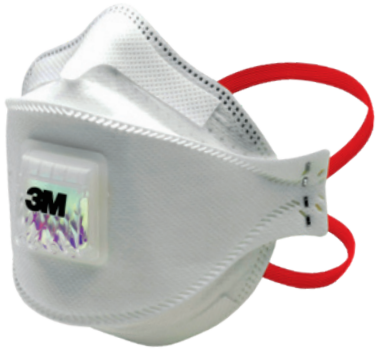
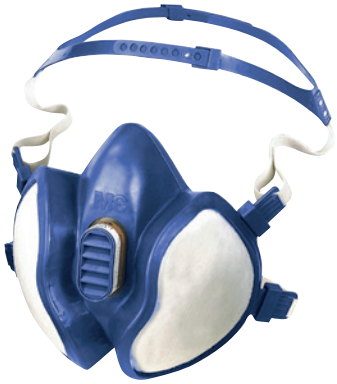
Examples of suitable RPE (depending on your risk assessment) may include:

FFP3 Disposable Respirator



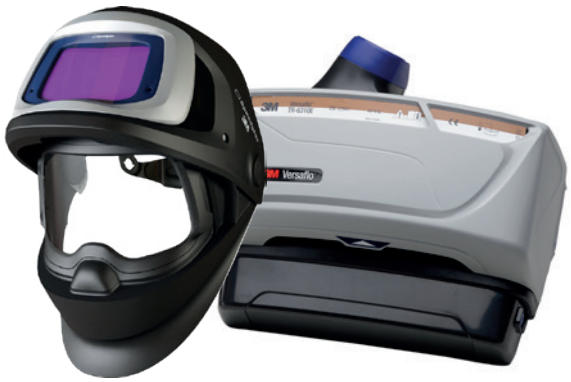
3M™ Aura™ Particulate Respirator 06933

Reusable Respirator offering P3 Particulate Protection



3M™ Maintenance Free Reusable Respirator 06942

Powered Air Respiratory System connected to Welding Headtop



3M™ Speedglas™ Welding Helmet 9100 FX Air with
3M™ Versaflo™ Powered Air Respirator TR-600

Please note: To achieve the expected level of protection, respirators that comprise a tight-fitting face seal, e.g. FFP3 disposable respirator, require the wearer to be suitably fit tested and clean shaven in the area of the face seal.

For advice on selecting the most appropriate 3M RPE for you, your situation and your workforce contact your local 3M representative or our health and safety helpline on **0870 60 800 60 (UK)**.

References

1. Change in Enforcement Expectations for Mild Steel Welding Fume http://www.hse.gov.uk/safetybulletins/mild-steel-welding-fume.htm [Accessed 26 February 2019]
2. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 118 http://publications.iarc.fr/569 [Accessed 26 February 2019]
3. HSE Task specific COSHH guidance for welding, cutting and allied jobs http://www.hse.gov.uk/welding/guidance/index.htm [Accessed 27 February 2019]

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