

Purchasing PPE during the COVID-19 Pandemic

Recommended use of international codes for respirators following the HSE Rapid Evidence Review

Whilst the Health and Safety Executive (HSE) recommends FFP3 as the control measure against viruses, the use of these may not be reasonably practicable as supplies can be low during a pandemic. Therefore, the HSE has undertaken a Rapid Evidence Review. Part 1 looked at the equivalence of N95 and FFP2 masks and the evidence to support their use in the UK as part of the PPE ensemble worn for aerosol generating procedures on patients with COVID-19.

This guide has been compiled to provide an overview of the advised use of international codes for respirators during the COVID-19 pandemic, and to clarify in which situations they may be used.



The correct Respiratory Protective Equipment (RPE) for the Exposure Hazard

Your COSHH risk assessment process will have identified the hazardous substances in your workplace, these may come from products that are hazardous substances or from work activities that contaminate the air. If, all other reasonably practicable measures to prevent or control exposure have been examined and you have identified and classed your airborne hazards as particles that can be removed by filter-type Respiratory Protective Equipment (RPE). Then then two types of respirators are most used:

1. tight-fitting disposable filtering face piece (FFP) respirators
2. loose-fitting powered hoods (TH2)

FFP3 and loose-fitting powered hoods provide the highest level of protection.

An Overview of UK Respirator Codes

Particle filters trap and hold particles from the air flowing through them and are classified according to their efficiency. The respirator facepiece or the filter will be marked with:

- The letter P (for particle)
- A number 1, 2, or 3 that will illustrate the efficiency
- The letters NR or R to show whether they are reusable

FF Filtering FacePiece	P Particle	1 Low efficiency	NR Not reusable
		2 Medium efficiency	
		3 High efficiency	R Reusable

HSE Rapid Evidence Review² and the advised use of International Codes

FFP2 and N95

It is widely accepted by industry that the N95 (USA Code) although tested against different standards are broadly equivalent to a FFP2¹. Previously, the N95 could not be used in the UK as they are not tested to the European standards and are not CE marked.

In a recent HSE Rapid Evidence Review², the Health and Safety Executive (HSE) references a 3M technical bulletin 'Comparison of FFP2, KN95, and N95 and other filtering facepiece respirator classes' which suggests that **it is reasonable to consider N95 and FFP2 masks as being equivalent for filtering non-oil based articles including bioaerosols (e.g. viruses).**

Summary of International Codes

FFP2	EU code, incl. UK
N95	USA Code
KN95	China code,
KF94	Korea code

KN95 and KF94

Neither the Chinese Code KN95 nor the Korean Code KF94 were within the scope of the HSE Rapid Evidence Review and at the point of writing are not approved for use in the UK and should not be used.

Codes for use in healthcare

FFP3 respirators and loose-fitting powered hoods are recommended in healthcare situations when caring for patients in areas where high risk aerosol generating procedures (AGPs) are being performed. The guidance also recommends that either one is used at all times in intensive care units (ICU), intensive therapy units (ITU), or high dependency units (HDU) where there are COVID-19 patients.

FFP2 respirators may be recommended as a safe alternative if a risk assessment where a risk assessment shows that they are suitable.

The HSE has stated that FFP2 and N95 respirators (filtering at least 94% and 95% of airborne particles respectively) offer protection against COVID-19 and may be used if FFP3 respirators are not available.²

Other respirators can be utilised by individuals if they comply with HSE recommendations.

Codes for use in sectors other than healthcare

N95 respirators have not been recommended by the HSE for use in sectors other than healthcare, at the point of writing. N95 respirators have not been tested to filter against oil-based particles and as such have only been recommended for use in situations where it may be used to protect against hazards comprising non-oil-based particles, such as a virus like COVID-19.

KN95 and KF94 codes have not been approved for use in the UK at the point of writing and should not be used.

FFP3 or FFP2 respirators must continue to be specified in sectors other than healthcare as they were previously.



¹ www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/glossary-of-terms
² www.hse.gov.uk/news/assets/docs/face-mask-equivalence-aprons-gown-eye-protection.pdf

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