

Fake disposable respiratory protective equipment (RPE) supplied to Queensland Coal Mines

Mines safety alert no. 373

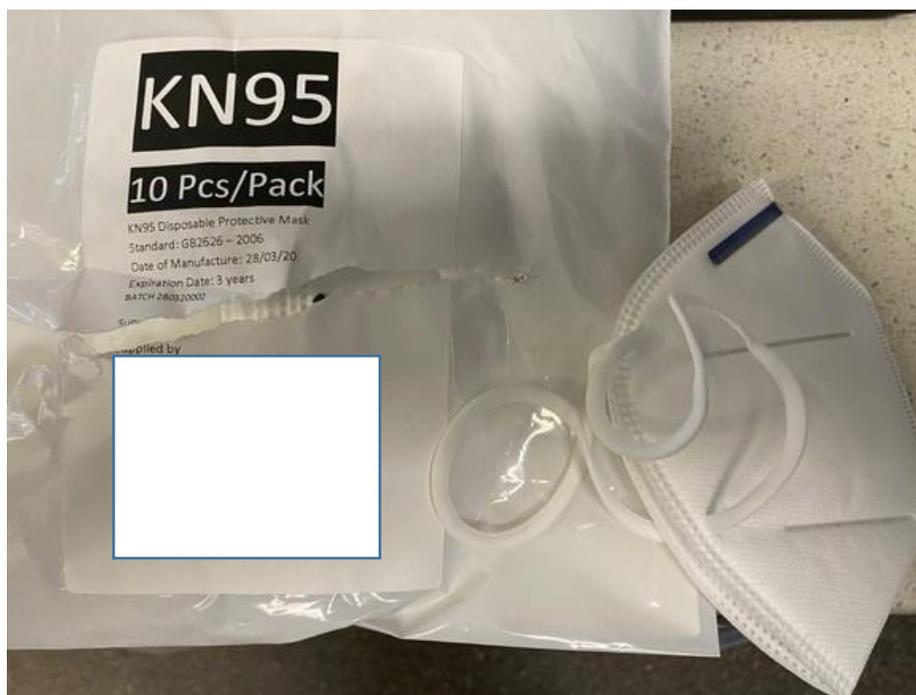
Background

Due to the current COVID-19 pandemic, the demand for disposable P2 respiratory protective equipment (RPE) has put extreme pressure on the available supply of these devices for use at coal mines, mineral mines, quarries and in other industries. As a result of these supply shortages, many sites have had to source alternative RPE, in some cases relying on international quality certification schemes other than Australian Standard (AS/NZS 1716:2012). Many of these standards/schemes are similar to AS/NZS 1716 and can provide an acceptable alternative until supplies of AS/NZS 1716 RPE becomes available. This should be done in accordance with the site's change management process.

Refer to this link for comparisons between various respirators of equivalence, the respective certification/classification scheme and the minimum performance and testing criteria to be adhered to when manufacturing those respirators. [Comparison between particulate filtering respirators](#)

What is the issue?

It has come to our attention that current demand for respiratory protection has resulted in sub-standard or "fake" respirators entering the industry that, despite being appropriately branded, have not been manufactured in accordance with a relevant standard or equivalent international scheme (i.e. A/NZS, NIOSH etc). It can be difficult to distinguish between authentic and fake RPE devices. The packaging and the appearance of these "fake" respirators can be very deceptive. The packaging will often list a protection factor (eg. P2, KN95 or N95) and include fraudulent labelling of the relevant certification body. Examples of some of the fake RPE encountered are provided below.



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Place alert on noticeboards and ensure relevant people in your organisation receive a copy.

See more safety alerts and bulletins at <https://www.dnrme.qld.gov.au>

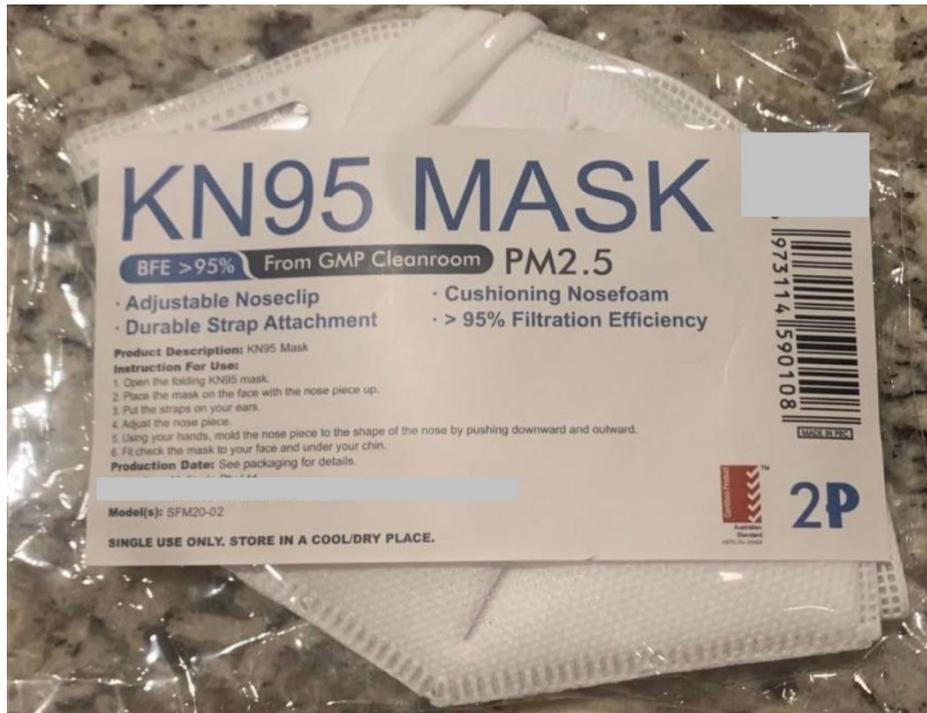
And the hazard database at <https://www.business.qld.gov.au/industry/mining/safety-health/mining-safety-health/mining-hazards/hazards>

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Fit Testing Results

Fit testing undertaken at a number of Queensland underground coal mines has demonstrated that although these respirators are authentic in appearance, they are unable to achieve a satisfactory facial seal and are therefore ineffective at providing appropriate protection (Refer Table 1 for pass rates). Use of these respirators in high airborne dust concentrations may inadvertently expose coal mine workers to respirable dust. In comparison, the authentic N95 disposable half face respirator approved under NIOSH certification scheme demonstrated a 100% pass rate.

Table 1: Fit test pass results of alternatively sources respirators from one underground coal mine.

| Assessed Mask: | Pass Rate: |
|---------------------------------|------------|
| Greenline 4201 FFP2 | 0% |
| Greenline 7301 FFP2 SPBS | 18% |
| Authentic NIOSH certified N95** | 100% |
| QSi HELP - IT-FFP2 | 5% |
| TWW KN95 - Ear looped | 0% |

** Brand name removed

Actions for all Coal Mines, Mineral Mines and Quarries

Until the temporary shortage of Australian Standard (AS/NZS 1716:2012) compliant P2 devices is restored, the following actions should be taken by sites relying on alternative RPE:

- Coal mines, mineral mines and quarries should request product certificates issued by a certifying body, these certificates should include a licence number and the manufacturer's name which should then be compared against information available of the certifying body's website.
- If sites are required to purchase RPE that has not been previously supplied to site, this RPE should be selected in accordance with the requirements of Australian Standards AS/NZS 1715. This includes quantitative fit testing by an appropriately qualified person of a suitable sample from the RPE batch to ensure the appropriate fit is afforded to the coal mine worker prior to use. **This will assist in identifying fake RPE.***
- Consider substituting P2 RPE with P1, which is still suitable protection for mechanically generated particulates (such as respirable coal dust and respirable crystalline silica). When considering whether this is an option, sites should understand that a P1 respirator is not suitable for thermally generated particulates such as those produced by hot work processes (soldering and welding).

***Note:** Given the current pandemic situation, special care should be exercised when performing a fit test in effort to maintain social distancing and good hygiene practices. Fit testing procedures should be assessed individually at site level and only undertaken by trained personnel.

Valuable Resources

- Some useful advice has been provided in the NSW SafeWork [Safety Alert – Supply of Fake Face Masks](#).
- NIOSH [approved](#) United States N95 disposable respirators.
- British Occupational Hygiene Society (BOHS) [Spotting fake respirator guide](#)
- NIOSH examples of [counterfeit respirators](#).

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