

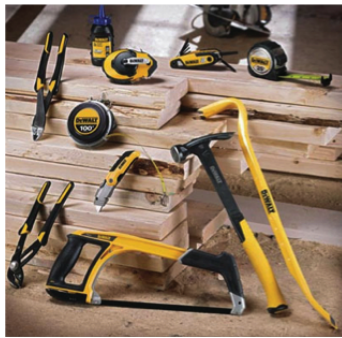
WELCOME to the third issue of Applied Safety the Applied Inspection health & safety newsletter. In this edition we will look at protecting your hands.

HAND PROTECTION

What is the most popular/useful tool in the world?

The answer is likely to depend on who you ask. A plumber may say a blowlamp; a joiner may say a smoothing plane; an electrician may say an insulated screwdriver; Jeremy Clarkson is likely to say "a bigger hammer". None of these, however, would be any use without the most useful and flexible tool of them all. A hand with four fingers and an opposable thumb. They even come as standard as a matched pair!

Useful and flexible hands certainly are, but robust? Maybe not so much. A blowlamp will burn skin much faster than it will heat copper pipe; a smoothing plane will remove layers of a hand faster than layers of any wood; a screwdriver will go through a hand as easy as it will butter; and many people know what damage



a hammer will do to an opposable thumb.

Protecting hands from injuries should always be high on our priorities. Nearly half of the recorded injuries in Acuren businesses over the last 2 years have involved an injury to the hands.

It is often only by losing the use of one hand we realise how much we need them, both of them, for everyday tasks. Just like eyes, therefore, there is a wide variety of protection available for our hands. Gloves are available in a wide variety of styles, materials, designs, and types and levels of protection. The most important European standard for gloves to protect the hands is probably EN388. That standard covers strength,

abrasion resistance, cut resistance and puncture resistance. Other standards cover things like how the glove affects dexterity, sizes, marking and others. So selecting the best gloves can involve a few considerations, but just picking up and using a suitable pair is always worth doing. Of course gloves need not be about physical protection, they can be simply about keeping hands warm, which is just as important.

The author of this article, who admits to having "a bit of a glove thing", says he has thirteen pairs of work gloves in his garage firstly for different types of work, and secondly so they can be changed when sweating makes them uncomfortable. That level of ready availability is easily justifiable on the basis of the low cost of most gloves.



AUNTY VIBRATION?!?

Anti vibration gloves have been a newsworthy development in hand protection in recent years along with the increased awareness of vibration white finger and other hand / arm vibration (HAV) conditions. The Health and Safety Executive (HSE) provided this conclusion on anti vibration gloves in their Research Report (RR795), "*The vibration reducing potential of the gloves tested is small and uncertain and includes the potential for amplification [of vibration exposure]. Gloves can not be relied upon to reduce an operator's exposure to vibration, even when the vibration characteristics of the tool are known*". In simple terms, that means the HSE's view is that "anti vibration gloves" don't work.

A QUESTION OF SUBSTANCE

Physical hazards are not the only dangers our hands encounter. All those cleaning solutions, oils, adhesives, dusts, and other substances can be at least as damaging. Even water can damage skin with enough contact.

Cases of occupational dermatitis must be reported to the HSE, and every year the most frequent cause of occupational dermatitis is dihydrogen monoxide, also called H₂O or water, though few people consider water to even be a chemical substance. Occupations like hairdressers and nurses are particularly at risk of this cause of occupational dermatitis because their hands are wet for extended periods or washed many times each hour.



Almost any substance in contact with the skin for long enough will cause harm. Some substances will cause that harm with a much lower exposure dose than water. The potential for harm should influence both the gloves we wear for protection, and how we put the gloves on, take them off, handle the gloves and look after them. We need to handle gloves carefully because, even if we carefully select impervious gloves to protect your hands from a harmful substance and diligently wear the gloves every time we work with the substance, all that effort to protect your hands can

be easily undone. It is commonly undone by poor practice in taking the gloves off, or handling the contaminated outer of the glove to transfer the substance to the skin, then putting the gloves back on and transferring the harmful substance to the inside of the glove. Then every time you put the gloves on thinking they are providing protection, the gloves can be causing harm. The best answer is to thoroughly wash and dry the outer surfaces of the gloves prior to taking them off.

What happens outside, stays outside!

One of the difficulties with nitrile or rubber gloves is the enclosed environment they create that retains moisture and keeps it in contact with the skin until the gloves are removed. This is the main reason why having contamination on the inside of the glove is so damaging.

Thin, easily available and disposable nitrile gloves are possibly the most common protection for hands in most types of work in Applied Inspection. The drawback with them is they are not very robust. They are easily torn and once torn can amplify substance exposures and harm for reasons similar to above. When removing these gloves, they should be carefully removed by peeling the gloves off, without touching the outer face, so they end up inside-out. Then put new gloves on over clean hands.

Welding and other hot work needs a different approach to protection. The main requirements are for physical strength and protection from heat with enough dexterity to manipulate the tools and work piece.



Moisturise, moisturise, moisturise.

All of this work we do with our hands removes essential oils and fats from the skin. It is important that we take action to replace those oils and fats. The best care for working skin is to frequently apply a simple emollient or moisturising agent.

Despite what adverts tell us, the most effective way is to use lots of something simple and low cost like aqueous cream. While it is possible to over

moisturise skin, it is much easier, more damaging, and much more painful, for working hands to have to little moisturising. The picture here is after just one week of improved skin care, with no other changes.

