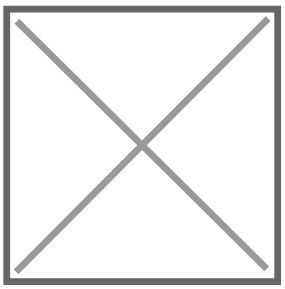

SKINFORMATION

SKINFORMATION

It is always a challenge to stay up to date. This section of the website has information on a variety of aspects of occupational skin management and skin anaylsis. If you would like to discuss any of these topics further please do not hesitate to contact us.

COSHH, CLP AND REACH

The following is our assessment of how new regulations will affect the current situation with regard to risk assessment and management for chemicals used in the workplace. This is only a very brief overview.

We are now having to contend with two new regulations, REACH (Registration, Evaluation, Assessment and Restriction of Chemicals) and CLP (the new Regulation on Classification, Labelling and Packaging of chemicals). The latter will ultimately completely replace the Chemicals (Hazard Information and Packaging for Supply) Regulations (CHIP). The former is a new regulation that requires any manufacturer within the EU or importer of chemicals into the EU to register their chemicals with the European Chemicals Agency in Helsinki. Under REACH most substances will have to be registered. The registrant must include in their registration the uses to which the substance will be put. In addition to the safety data sheet the registrant must provide what have been termed Exposure Scenarios, describing for each use the precautions that must be taken if it is to be used safely. Note that:

REACH is only concerned with single substances

REACH is the regulation that will control the safety data sheet for each substance

CLP is concerned with classification of the substance hazard. Risk phrases will be phased out by 2015. New Hazard Statements replace them, but are not direct equivalents to the old risk phrases. Both should be shown on safety data sheets during the transition period. CLP also introduces a number of new pictograms to be shown on packaging and changes the meanings of some of the existing ones.

The term 'preparations", as used in CHIP and COSHH, is being replaced by the term 'mixtures'.

A 'downstream user' who takes several substances and mixes them to produce a particular product has to produce a new safety data sheet for his product (mixture) but need only attach the Exposure Scenarios for the individual constituents to this. Given the complexity of some mixtures safety data sheets may run to many pages. Exposure Scenarios from different manufacturers of the constituents in the mixture may not agree.

It will be the responsibility of both the formulator and end user to ensure that the use to which it is intended the mixture be put is included in the registration of each constituent, otherwise use for this use will be illegal.

Given that the REACH regulation runs to many hundreds of pages (with several thousand pages of guidance notes) and the CLP regulation is 1355 pages long, there is considerable scope for confusion. There have already been many amendments to REACH and CLP. It is almost certain that many more will occur during the transition period, i.e. through to 2018 and 2015 respectively.

However, much of this will relate only to the information in the safety data sheet and on the labels of chemicals as purchased. As we explain on our courses, safety data sheets and labels are not reliable sources of hazard data when chemicals are used as the information they contain is limited and relevant only to the chemical as supplied. Hazards arising when one or more chemicals are used can be quite different to those of the individual substances as supplied.

Fortunately in the U.K. we still have the Health and Safety at Work etc. Act, dating back to 1974. Section 6-1 of this Act requires a supplier to provide sufficient information about his product that it can be used safely for the purpose for which it has been supplied.

This is only a brief overview. Keep in mind that risk assessments for skin exposure to chemicals must be based on the true hazard of the chemical(s) that arise out of their use. For a more detailed explanation contact us.

HOW USEFUL IS THE SAFETY DATA SHEET?

We still find some health and safety practitioners, and many managers, referring to the safety data sheet as a COSHH safety data sheet. This is not correct, since the requirements for the safety data sheet are set down in CHIP, not COSHH. Indeed, paragraph 13 of the ACoP for COSHH indicates clearly that the information on the safety data sheet may not be sufficient for a COSHH risk assessment.

WHY IS A SAFETY DATA SHEET ALONE NOT SUFFICIENT FOR SKIN EXPOSURE RISK ASSESSMENT?

The safety data sheet provides data on the chemical products 'as supplied' and is generally limited in its list of constituents to include only those that have been allocated a risk or safety phrase. However, there are thousands of chemicals that can cause damage to health if in contact with the skin that will not have a risk phrase and will often not appear on the safety data sheet. This is one reason why this document is not adequate information for a risk assessment.

A risk assessment for skin exposure based on the information on the safety data sheet may be seriously inaccurate and may result in workers' health being put at serious risk.

In fact, what is needed for a skin exposure risk assessment is information on the hazards of chemicals as used, not as supplied. We generally purchase chemicals to use them for some purpose. In the process it is usual that a change will occur. For example, we may fill a degreasing tank with toluene. However, as soon as the first component is degreased we no longer have pure toluene, but toluene mixed with the various chemicals that have been removed from the component. As we continue to degrease components in the toluene its composition will continue to change. Since toluene can act as a vehicle, assisting some of the contaminants to penetrate into, or through, the skin, the hazard will depend upon the nature of these contaminants and their concentration and not simply the toluene alone.

We may heat, mix, react or otherwise process the original chemical. In such circumstances what we may be using may bear little resemblance to what is listed on the safety data sheet and may present very different hazards if in contact with the skin. It may also require that different gloves are used than what would be acceptable for the product as supplied.

SO WHERE SHOULD WE LOOK FOR DATA ON THE HAZARD OF THE CHEMICAL WE ARE USING?

The answer lies in the original Health and Safety at Work etc. Act 1974. Section 6-1 requires a supplier of a product to provide sufficient information on his product that it can be used safely for the purpose for which it has been supplied. This is a very different requirement to what the supplier needs to state on the safety data sheet. However, experience indicates that many suppliers are unaware that merely supplying a safety data sheet does not constitute compliance with their legal responsibilities.

A PROBLEM FOR THE SUPPLIER?

Of course, if the supplier is to comply with this duty he will need either to specify that the product may only be used for a certain purpose (and then provide the relevant information on safe use for this purpose) or will need to cooperate with the end user to ensure that he is both aware of what will happen to his product and how this may influence the hazard that this represents. He will then need to ensure that he has provided the appropriate information as to how it can be used safely. It is questionable whether many suppliers will have the knowledge to be able to do this, particularly if they are merely a distributor of the chemical products.

HOW CAN ENVIRODERM SERVICES HELP?

At EnviroDerm Services we have developed a system that can be used by our clients to draw the supplier's attention to his duties under the Act and to ensure that the end user can provide the information needed so that the supplier can establish how the hazards his product represents may change as a result of the use and how this might affect the information that he needs to supply to meet his legal obligations.

Please contact us for more information on this

THOUGHTS ON LATEX ALLERGY

Much has been written about latex allergy, the type I allergic reaction to the proteins in natural rubber latex gloves. Unfortunately, much of what has been written does not seem to accord with the scientific and epidemiological evidence. This shows clearly that the allergic reaction to natural rubber latex was limited to the wearing of the single-use natural rubber gloves that were high in free protein and powdered for ease of donning. Whilst occasional type IV allergic contact dermatitis to the chemicals used in rubber gloves has occured, the main skin reaction to occlusive gloves is an irritant contact dermatitis. Type IV reactions are also common with single-use nitrile gloves, sometimes used as a replacement for natural rubber latex gloves, and irritant reactions will occur with any occlusive glove. In short, there is no justification in the view, still encountered, that it is necessary to go "latex free". This could well be counter-productive.

WHAT CAUSED THE "LATEX ALLERGY EPIDEMIC"?

Natural rubber latex is obtained from the Brazilian rubber tree (Hevea brasiliensis). This milky white fluid on its own is not suitable for producing a glove. It is only when mixed and reacted with a range of chemicals that what we recognise as a natural rubber glove appears. If the reaction is carried out with a minimum of the added chemicals and such that the cross-reaction is complete, then almost none of the sensitising proteins in the natural rubber latex will be bio-available. The interior surface of the glove is then washed and chemically treated. This results in a glove with a smooth internal surface and thus can be donned easily. Tests have shown that a high quality natural rubber glove produced in this way has so little of the sensitising proteins available to penetrate the skin that they can actually be worn by many persons already sensitised to latex proteins.

With the rapid increase in AIDS and HIV the response from healthcare organisations around the world was to substantially increase the wearing of these thin, single-use gloves. This resulted in a shortage, combined with a significant increase in the cost for gloves to the healthcare organisation. Some manufacturers attempted both to increase production and reduce cost by taking steps in the manufacturing process that resulted in gloves with a 'sticky' internal surface and high free protein levels. To aid glove donning they introduced a glove powder. This could bond with the latex proteins. These could then become airborne and be inhaled, resulting in sensitisation and subsequent asthma and dermatitis.

HOW CAN LATEX ALLERGY BE PREVENTED?

The answer is that it is not necessary to remove natural rubber latex from the working environment.

Indeed, this could be counterproductive as natural rubber latex gloves offer properties that no other glove material can match with respect to biological hazards and ease of use. All that is necessary is to ensure that any natural rubber latex gloves are low in free protein (<50??g/g of glove material) and powder free. By taking this decision in the state healthcare system in Germany the incidence of latex allergy was reduced to a level no higher than that of the population in general, despite the fact that natural rubber latex gloves are the standard glove.

In fact, moving to other glove materials may actually increase the level of skin problems, mainly type IV allergic contact dermatitis, whilst at the same time reducing the protection provided against biological hazards.

There are specific situations where alternatives to natural rubber latex is recommended, but these need to be dealt with on an individual basis.

This subject is dealt with in more detail on both the "Skin health surveillance and management" and the "Risk assessment and management for workplace skin exposure" courses. For more information on these courses please click here .