

Health and Safety in Nail Salons

Health and Safety Advice Note: Nail Salons

Acrylic Nails

The problem

A number of the products used in the artificial nail business contain substances which are hazardous to health. These substances may be toxic through skin contact, ingestion, or inhalation, often by all three routes.

One of the main ingredients of concern is methyl methacrylate (MMA) which carries the following warnings:

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20 degrees C.

The substance irritates the eyes, the skin and respiratory tract.

Repeated or prolonged contact may cause skin sensitisation. Repeated or prolonged inhalation may cause asthma. The substance may have effects on the central nervous system and the peripheral nervous system.

It is also highly flammable and causes explosive mixtures.

A similar though marginally safer product is ethyl methacrylate (EMA) but again it has similar hazardous properties.

Some products claim to be 'MMA-free' and these often contain EMA or a related compound Methoxy Ethoxy Ethyl Methacrylate.

The Material Safety Data Sheets (MSDS) for these nail products ALL indicate that:

suitable protective gloves must be worn
eye protection is required (with side shields)

In the case of MMA and EMA containing products, LOCAL EXHAUST VENTILATION (LEV) is necessary to prevent toxic and/or explosive concentrations.

MMA and EMA both have what are known as ‘sub-acute’ effects which means that they can seriously damage your health even when they are not at toxic levels. This is because they can cause *sensitisation* or an allergic reaction which may lead to contact dermatitis or occupational asthma. Once sensitised, further exposure to even minute quantities of the agent may cause life threatening asthma attacks. While the extreme forms of sensitisation may be rare, the lesser conditions can mean that the subject can no longer work in the artificial nail industry (even with very efficient LEV and ‘safe’ products –once metabolised, Methoxy Ethoxy EMA breaks down in the liver to EMA).

The Legal Framework - COSHH

As well as general duties under the Health and Safety at Work etc., Act 1974 (HSWA) to protect the health and safety of employees (and customers), specific requirements are imposed by the COSHH Regulations:

Regulation 6 requires the employer to undertake an assessment of health risks created by work involving substances hazardous to health.

This assessment must include the following:

- (a) an assessment of risks to health
- (b) consideration of the practicality of preventing exposure to hazardous substances
- (c) steps needed to be taken to achieve adequate control of exposure where prevention is not reasonably practicable (see Regulation 7)
- (d) identification of other actions necessary to comply with Regulations 8-12.

Regulation 7 requires the employer to prevent or control the exposure of employees to hazardous substances.

Regulation 8 requires the employer to devise control measures to be used by employees when engaged in activities involving hazardous substances. This would include extract ventilation and the provision of Personal Protective Equipment.

Regulation 9 requires the employer to maintain, examine and test any control measures required of Regulations 7 and 8.

Regulation 10 requires the employer to monitor exposure to hazardous substances in the workplace.

Note: Since chemical analysis of this type is prohibitively expensive, alternative strategies should be devised - see Regulation 11.

Regulation 11 requires the employer to undertake health surveillance where the exposure of the employee to any substance hazardous to health has an identifiable disease or adverse health effect and there are valid techniques for detecting indications of the disease or the effect.

Hierarchy of measures

Under the COSHH Regulations there is a hierarchy of measures which can be used to protect employees from substances harmful to health:

- 1) Substitution: select a safer or non-hazardous product if available
- 2) Enclose the process –not practicable with nail treatments
- 3) Engineering controls –Local Exhaust Ventilation (LEV) to remove harmful vapours.
***Note:** The electrical equipment may need to be intrinsically safe, ie explosion proof if flammable products are used.*
- 4) Personal Protective Equipment (PPE) –last resort! To protect employees from these substances would require full face respirators which may be disturbing for customers.

The favoured method is the use of engineering controls since LEV gives the best control. This combined with good hygiene practice should protect employee's health.

Good Hygiene Practice

1) Essential: Wear approved side-shielded spectacles to protect the eyes. You may wish to consider offering eye protection to customers to protect them from nail clippings, dusts, and chemicals.

2) Good Practice:

2.1: Wear long sleeved overalls to protect the wrist and fore-arm from contact with chemicals and dusts

2.2: Wear appropriate gloves to protect the hands from contact sensitisation. These gloves should ideally be neoprene, but as these are difficult to get hold of, any polymer gloves may be suitable (check with chemical supplier). Beware of using latex as some individuals may develop an allergic reaction.

2.3: Always replace the top on containers when you have finished using them.

2.4: Where possible, use dispensing bottles with a small aperture to reduce the amount of vapour that can escape into the air.

2.5: Chemical soaked gauze pads should be placed in a sealed bag before being placed in a metal bin with a closing lid.

2.6: Eating and drinking should be prohibited in the work area to prevent the ingestion of harmful materials.

2.7: Smoking must be banned in the salon because of the highly flammable liquids in use. Many of these liquids produce vapours which are heavier than air and these can 'creep' along table tops and floors to be ignited at a distance.

2.8: Technicians should wash their hands, arms and face with mild soap and water several times a day to remove potentially irritating dust.

Experienced technicians may think that they can work cleanly but brush application of products produces micro aerosols which may end up directly on the skin of the hands, wrist and fore-arms or be transferred there after being deposited on the work surface. Even these tiny quantities can cause sensitisation in some individuals.

What you must do

- 1) Obtain Material Hazard Data Sheets for all substances used in the workplace. These are available from the supplier and manufacturer. They must be provided free of charge when requested.
- 2) Check the 'Hazards', 'First Aid', 'Health Hazard Information' and 'Exposure Controls/Personal Protection' headings.
- 3) If eye protection is indicated, then eye protection of the appropriate grade must be supplied.
- 4) If phrases like 'prevent skin contact' are used, then gloves must be worn. 'Avoid skin contact' may indicate a use for gloves, but regular hand washing may suffice. If gloves are recommended, provide and use gloves of the appropriate type (some materials will dissolve rubber, etc and be ineffective).
- 5) 'Do not breathe vapour' indicates a need for Local Exhaust Ventilation. Where respiratory sensitisation can occur, LEV is essential.
- 6) Flammability of products affects the standard of electrical fittings that may be used in the area/salon. Highly flammable and volatile substances like MMA would mostly likely require intrinsically safe (ie explosion proof) electrical fittings. EMA presents similar dangers.
- 7) The most suitable form of LEV for nail salons is a ventilated work table. (As described in HC 28 NIOSH Hazard Controls: Controlling Chemical Hazards during the Application of Artificial Fingernails (U.S. Department of Health and Human Services; Centers for Disease Control and Prevention) available on the internet <http://www.cdc.gov/niosh>.)
- 8) Carry out health surveillance as described at appendix 1.

Summary

In the artificial nail business, safer products are available/in development and where possible these should be used. Obviously, it is the final product that determines commercial success and where this finish can only be achieved through using the more hazardous products like MMA and EMA, then they can be used safely with the appropriate precautions as described above.

Greater concentration on hygiene practices and awareness of the dangers of using these hazardous products can lead to a relatively risk free life in the nail enhancement industry without developing serious ill health.

Appendix 1

Sample questionnaires for surveillance of employees potentially exposed to substances which can cause asthma.

This document is taken from ‘Proposals for Reducing the Incidence of Occupational Asthma, including an Approved Code of Practice: Control of Substances that cause Occupational Asthma (Consultative Document CD164)’ and may be freely reproduced and/or modified by individual occupational health professionals.

Notes:

- 1) Employees should be instructed about the possible effects of occupational asthma and should be warned that symptoms can occur outside normal working hours.
- 2) The pre-exposure questionnaire should be administered before someone starts work to establish health status.
- 3) While work with substances which can cause occupational asthma continues the periodic questionnaire should be used at least annually, or as advised by an occupational health adviser. Completion after six and twelve weeks of employment is recommended.
- 4) Employees exposed to substances which can cause occupational asthma who develop any symptoms should be referred to their GP or an occupational health adviser (eg EMAS).

Note: MMA and EMA have not been allocated the risk phrase ‘R42’ in the UK which would indicate that they are respiratory sensitisers. However, evidence from the U.S. governmental agency is very persuasive (the artificial nail industry is relatively new to the UK whereas it has a thirty year history in the US).

Initial questionnaire for surveillance of people potentially exposed to substances which cause occupational asthma.

To be completed by the competent person

Company Name.....

Address.....

.....

.....

In this workplace substances are in use which have been known to cause allergic chest problems. Following the risk assessment under Regulation 6 of the Control of Substances Hazardous to Health (COSHH) Regulations 1999, management have decided to carry out a programme of pre-exposure and periodic health surveillance as required by Regulation of the COSHH Regulations.

In some cases further advice may be required from an occupational health adviser (eg EMAS).

I understand that a programme of health surveillance is necessary in this employment and will form part of my management health record.

Signature of Employee.....Date.....

Signature of Responsible person.....Date.....

Referred for further investigation YES/NO

Would you please answer the following questions:

1 Surname.....Forenames.....

Date of Birth.....

Home address.....

.....

.....

Telephone number.....

2 Have you any chest problems, such as periods of breathlessness,
wheeze, chest tightness or persistent coughing? YES/NO

3 Do you believe that your chest has suffered as a result of previous
employment? YES/NO

4 Do you or have you ever had any of the following? (Do not include
isolated colds, sore throats or flu.)

- | | |
|---|--------|
| a) Recurring soreness or watering of eyes | YES/NO |
| b) Recurring blocked or running nose | YES/NO |
| c) Bouts of coughing | YES/NO |
| d) Chest tightness | YES/NO |
| e) Wheezing | YES/NO |
| f) Breathlessness | YES/NO |
| g) Any other persistent or history of chest problems? | YES/NO |

To be completed by responsible person:

- | | |
|---|-----|
| a) No further action required | ___ |
| b) Refer to occupational health adviser | ___ |

Signed(responsible person).....Date.....

I confirm that the responses given by me are correct and that I have
received a copy of the completed questionnaire.

Signed.....Date.....

Please note: It will be for a health professional to assess the relevance of
any respiratory symptoms and to obtain a detailed smoking history if
necessary.

Health questionnaire for on-going surveillance of people potentially exposed to substances which can cause occupational asthma

To be completed by the responsible person

Employees name.....

The questionnaire should be completed six weeks after employment commences and annually thereafter on the anniversary of the commencement of employment –unless an occupational health adviser determines otherwise.

Further advice will be required from an occupational health adviser if any yes box is ticked.

Since starting your present job have you had any of the following symptoms either at work or at home? (Do not include isolated colds, sore throats or flu.)

- | | |
|--|--------|
| a) Recurring soreness or watering of eyes | YES/NO |
| b) Recurring blocked or running nose | YES/NO |
| c) Bouts of coughing | YES/NO |
| d) Chest tightness | YES/NO |
| e) Wheezing | YES/NO |
| f) Breathlessness | YES/NO |
| g) Have you consulted your doctor about chest problems since the last questionnaire? | YES/NO |

To be completed by responsible person:

- | | |
|---|-----|
| c) No further action required | ___ |
| d) Refer to occupational health adviser | ___ |

Signed(responsible person).....Date.....

I confirm that the responses given by me are correct and that I have received a copy of the completed questionnaire.

Signed.....Date.....

Notes:

Some internet sites which may be of use:

<http://www.hse.gov.uk/condocs/closed/cd164.pdf> HSE Occupational asthma

<http://www.hse.gov.uk/pubns/indg95.pdf> HSE Respiratory Sensitisers

<http://www.hse.gov.uk/pubns/indg320.pdf> HSE Latex and you

<http://www.hse.gov.uk/pubns/indg330.pdf> HSE Selection of gloves

<http://www.cdc.gov/niosh/hc28.html> HC28 NIOSH site