

# Occupational Safety Measures

- ▶ As practice shows, reaction resin products (e.g. EP resins and hardeners or polyurethane products, particularly isocyanates and amines!) are still being handled in too careless a manner. This may affect the user's health. This mainly applies to hazards for skin and eyes in the form of irritations, caustic reactions, sensibilization (allergies) or even blindness.

**Health damage can with great certainty be avoided by means of appropriate safety precautions and protective measures.**

Such safety precautions for the safe handling of these substances are listed in the following. They are designed to advise you and shall help you to protect yourself and your employees from damage caused by these substances.

## Instruction of employees

Each user must know what the hazards are when dealing with chemicals. Let us first clarify how substances can enter the body:

- By inhalation
- By swallowing
- By skin contact

These **ways of exposition** can be avoided by corresponding technical solutions or suitable protective clothing. Any careless or improper dealing with these substances must be avoided as no sensibilization is possible without contact!

## Eye protection

**Wear protective goggles!**

When carrying out work involving splashing, e.g. the mixing of substances, a full face mask is recommended! Reaction resins, particularly the harder components, cause irritations in the event of eye contact and may even cause caustic reactions with severe consequences. This is why it is absolutely vital to wear protective goggles. If material still gets into the eyes in spite of this, rinse immediately with plenty of water and seek medical advice. This rinsing of eyes should be practiced for emergencies.

## Skin protection

**Avoid all skin contact! Wear protective gloves, long-sleeved protective clothing and, if necessary, cuffs for your lower arms.**

In the event of contact with skin, isocyanates react with skin components which results in soiling which is very difficult to remove. Skin areas soiled with liquid EP resins must be dabbed with a piece of clean cloth (without rubbing too hard) until the soiling has been removed. Then wash the skin with plenty of water and a mild special cleaning agent. A skin care barrier cream should be applied regularly to the skin, particularly before taking up work and after washing. Gloves must be kept clean inside. In the case of prolonged or repeated handling, the gloves should be made of nitril or butyl rubber (observe notes by the glove manufacturer).

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## Hygienic measures

**Particularly before breaks (also cigarette breaks!), meals and visits to the toilet and upon completion of the work, it is absolutely vital to wash hands.**

Remove resin residue from hands and fingernails with soap and water only or with special cleaning agents, but do not use any solvent for cleaning your skin because solvents degrease the skin, make it more sensitive and the substances deeply penetrate into the skin folds and cracks.

### Cleanliness at the workplace!

Spilled or dripped resins must be removed immediately in order to prevent these substances from spreading. Preferably use disposable devices for weighing, mixing and applying resins because hazardous materials may be spread when cleaning the devices with solvents and the solvents pose other risks too. Do not eat or drink and do not store any foodstuffs or drinks at the workplace. Reaction resin residue on equipment pieces, computer keyboards, clothes, tools, door handles or machinery etc. can lead to skin contact and may cause skin damage.



## Respiratory protection

### Provide sufficient air exchange!

The vapors which may emerge during the curing process of reaction resin are harmful to your health! In case of insufficient ventilation, respiration protection is required (e.g. combination filter A-P2). Workrooms must be aerated and ventilated appropriately. Always keep reaction resin containers closed.



## Sources of information

- Safety data sheets of the individual products
- Action plan for EP resin in the construction trade by Deutsche Bauchemie
- Code of practice, marking of monomeric isocyanate MD with R40 background by Deutsche Bauchemie
- Code of practice M 023 of the trade association of the Chemical Industry
- Code of practice M 044 of the trade association of the Chemical Industry