

## Safety measures for reaction resins

### APPLICATION ADVICE

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**1. General Information:** Care is required when mixing and handling materials and reactive resins as they may contain hazardous substances. It should be noted that they are not inert until fully cured. We set out some information on safe handling of our products to assist in risk-free working.

**1.1 Hazardous Material Information:** All packaging units containing hazardous substances are appropriately labelled with information on the hazards and their safe handling. Hazardous material symbols are also displayed where required by the "Dangerous Goods Regulations."

**2. Hazards:** The principal risks when mixing and handling coating materials and reactive resins are contact with the skin, inhalation of volatile components or dust as well as swallowing. The main consequence of which is irritation of the skin and eyes and in some cases absorption of the substance into the blood stream. Reactive resins produce an allergic reaction with some people and adequate protection must be taken. Further information on health hazards is found in the safety data sheets, the markings, and the GISBAU information. Completely cured products are inert and pose no health-hazards.

### 3. On site handling

**3.1 Mixing of Multi-Component Systems:** The materials are delivered in packages containing the exact quantities of each component to ensure correct mixing ratios and thus achieve proper curing. It is important to note the information on the technical data sheets.

**3.2 Cleaning the Equipment:** The equipment used (e.g. mixers) must be cleaned either mechanically (scraping, abrading) or with cleaning agents from MC-Building Chemicals. Cleaners should be used sparingly, and reused several times and then Disposed of in an approved manner. Cleaning agents must NOT be used to clean the skin !

**4. Practical Protective Measures:** Since some escaping vapours are heavier than air ensure good ventilation at floor level is provided. Also provide adequate washing facilities and an adequate supply of eye washing liquid on site. Avoid splashing the material when mixing and using. The occupation-medical examinations stated in the Dangerous Goods Regulations or BEV A4 and, if need be, dermatological examinations must be conducted.

**5. Personal Protection Measures:** Storage of foodstuffs, eating, drinking or smoking must not take place in the working areas. Also avoid contact by the product with eyes, skin or clothing.

#### Eye Protection

Always wear protective goggles. If using the spray method: full protection eyeglasses should be worn!

#### Skin Protection

Always use a barrier cream as well as wearing suitable nitrile or butyl rubber gloves when using coating materials and reactive resins. Advice and proof of supplier can be obtained from the Bundesverband Handschutz e.V. (German Association for Hand-protection), Brunneweg 1, 27404 Elsdorf, GERMANY. After the final cleaning of the skin, please treat the exposed skin-areas with skin care protection for fat-restoration and regeneration support.

#### Clothing

Soiled clothing should be removed and cleaned before re-use. Clothing should be changed after work and washed at least once a week.

**5.1 Protection when using spray applied reactive resins:** When spray applying reactive resins e.g. MC-FLEX 2097 personal protective garments, in addition to that specified in the BEV C 22 "Construction Work" and the BEV "General Regulations" (BEV A 1), are recommended. Protective Suit for Chemicals: Disposable boilersuit spray proof protective clothing, CE-certified according to directive 89/686/EG, e.g. Tyvek Type 1421 N or equivalent. Protective Gloves Category 2 in compliance with EN 420, e.g. Sahara or Sahara plus from KCL or an equivalent for spray-application. It is advisable to join the cuffs of the gloves to the protective suit by wrapping them with duct tape, to prevent the penetration of atomised spray. When handling solvents (equipment cleaning), wear Category 3 gloves in compliance with EN 420, e.g. Vitojet from KCL or an equivalent. Breathing Protection: Full face masks with rip-off visors and combination filter A2/P2 (minimum oxygen content of the air 17 vol% by volume) should be worn. The filter element should be replaced at least each day or more frequently if resistance to breathing increases. If there is insufficient ventilation of the work area then artificial ventilation with fresh air must be employed which air should be free of oil and water. Skin Protection: A barrier cream should be applied to all areas of exposed skin before starting Work. After washing off it is advisable to apply a moisturising or skin conditioning cream.

**6. Safe Disposal and Environmental Protection:** Coating material or reactive resins must not get into the sewage systems or ground water. Extreme care must be taken when handling these materials to avoid any risk of such contamination. In the event of a spill the material should be contained and a liquid binding material (e.g. sand, soil or chemical binders) applied as quickly as possible. The mixture can then be bagged and disposed of in an approved manner.

## 7. Some Important Regulations and Data Sheets

- Ordinance for Hazardous Substances 1999 from the Federal Minister for Labour and Social Affairs Technical Regulations
- Hazardous Substances or Technical Regulations for Dangerous Substances from the Federal Minister for Labour and Social Affairs
- Data-sheets of the Berufsgenossenschaft of the Chemical Industry:
  - BEV D25: Processing of Coating Materials BEV A 4: Occupation-medical Prevention
  - 004: Irritating Substances / Corrosive Substances
  - M 017: Solvents
  - M 023: Polyester- and Epoxy-Resins
  - M 050: Handling of health-hazardous Materials All data-sheets issued by the Berufsgenossenschaft of the Chemical Industry can be obtained from the Jedermann-Verlag, P.O.B. 103140, 69115 Heidelberg.
- Data-sheets on:
  - Handling of PUR-coating materials: BEI 524 Polyester- and epoxy-resins: ZH1/301 Solvents: BEI 621
  - Transport of Hazardous Materials: call number: 659.5 available from the Carl-Heymanns-Verlag, Cologne
- Data-sheet "Dangerous Materials" from the Bayerisches Landesinstitut für Arbeitsschutz, Pfarrstrasse 3, 80538 Munich
- Data-sheet "Application of Reactive Resins on Concrete, part 3.2" from the Deutscher Betonverein, Bahnhofstrasse 61, 65155 Wiesbaden

**MC-Building Chemicals' emergency information desk: +49 - 178 / 310 10 43**

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**Note:** The information contained in this data sheet is based on our experience and is correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual structure, to the specific application and to non-standard local conditions. Application-specific conditions must be checked in advance by the planning engineer/specifier and, where different from the standard conditions indicated, will require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2100004820]