Storage and transport

Storage

Silikal resins are low-viscosity acrylic resins with monomer esters of acrylic and methacrylic acid, in particular methyl methacrylate (MMA). The storage and transport regulations are determined by the percentage of monomer MMA. For other products which do not contain any methacrylic acid esters, such as epoxies or polyurethanes, other regulations may apply – these regulations can be found in the safety data sheets or are available on request in particular cases. Silikal resins with monomer MMA are flammable. For safe handling of Silikal resins, please refer to our safety guidelines **" Information on safety and protection "**. As they are flammable, Silikal methacrylic resins should be kept away from open sources of ignition. They must be stored in a cool place, protected from direct sunlight, at temperatures below +25 °C in closed containers. It must always be ensured that the storage rooms are adequately ventilated. If these guidelines are observed, the storage durability of Silikal resins in their original unopened containers is at least 6 months for ready-to-use products and 9 months for clear resins. Storage at low temperatures for prolonged periods can cause partial quantities of dissolved paraffins to separate out at the resin surface. In such cases, the container contents must be stirred before use. Certain volume limits apply for storage. Storage spaces above a certain size need to be reported and require approval.

Storage of SILIKAL® BPO

The hardening powder SILIKAL® BPO is a Class 5.2 organic peroxide (UN number 3106) and may undergo exothermic decomposition at higher temperatures. This can cause harmful and flammable gases to develop. SILIKAL® BPO must therefore not be left in vehicles parked in the sun and it must not be stored in direct sunlight. SILIKAL® BPO must always be stored in the closed secondary cardboard packaging both during transport and in storage.

Transport

Silikal resins such as SILIKAL® BPO are subject to the transport regulations of

GGVSE / ADR (road)

GGVBinsch / ADNR (inland waterways)

GGVSee / IMDG (high seas)

ICAO-Ti / IATA-DGR (air).

They must be packed, labelled, loaded, transported and unloaded in accordance with these regulations.

A) Packaging

(1) The packaging must be manufactured and sealed in such a way that the contents cannot escape once packaged ready for shipment under normal transport conditions, particularly as a result of a change in temperature, humidity or pressure. No hazardous substances may adhere to the outside of the packages. These regulations apply to new packaging and to packaging that is re-used.

(2) The parts of the packaging which make direct contact with hazardous substances must not be impaired by chemical or other actions of these substances; they may need to be given a suitable inner lining or treatment. These parts of the packaging must not contain any components which could react dangerously with the contents, form hazardous substances or considerably weaken them.

(3) All packaging, with the exception of the inner packaging of assembled packaging, must conform to a design type which is tested and approved according to the regulations in section IV. Mass-produced packaging must conform to the approved design type.

(4) If packaging is filled with liquids, some unfilled space must remain to make it possible to ensure that the expansion of the liquid as a result of the temperatures which may be reached during transportation would neither cause the liquid to escape nor result in any lasting deformation of the packaging.

B) Identification

Hazardous substance labels must be applied to the individual packages in accordance with the following regulations:

(1) Labels 1, 2, 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 7, 7 B, 7 C, 8 and 9 incl. UN no. must take the form of a square set at an angle of 45° with a side length of 10 cm. They must be marked with a continuous black line running around the edge at a distance of 5 mm. Hazardous substance labels which are to be applied to fixed tanks, demountable tanks, containers and swap bodies must have side lengths of at least 25 cm.

(2) Labels 10, 11 and 12 must take the form of a rectangle in standard A5 format (148 x 210 mm). Labels on packages may be reduced in size to standard A7 format (74 x 105 mm).

(3) The bottom half of the hazardous substance label must contain the number of the hazardous substance class indicating the type of hazard.

(4) Hazardous substance labels which are required by the requirements of this appendix must be adhered to packages and fixed tanks or fastened in some other appropriate way. If the state of the outside of a package does not permit this the labels should be stuck on cards or tablets securely attached to the package. Instead of labels, permanent hazardous goods symbols which conform exactly to the models described above may be affixed to the shipping packages and to the fixed tanks.

(5) Packages with Silikal reactive resins, acetone or SILIKAL® MMA Cleaner must have a label conforming to model 3:

Packages with SILIKAL® BPO must have a label conforming to model 5.2:

C) Loading

- Only undamaged packages which have been packed and labelled according to regulations are permitted for transport.
- Written instructions, if required, are to be handed over to the vehicle driver.
- Smoking is absolutely prohibited during loading.
- Only vehicles conforming to regulations and carrying the corresponding equipment are permitted for loading. This must be checked by the loading supervisor.
- The cargo must be secured to the load platform to prevent it from tipping over or slipping.
- Warning signs must be applied as required. The loading supervisor shares responsibility for ensuring that all provisions set down in the individual regulations for loading and transport are observed.

Transporting hazardous goods by car

Transporting hazardous goods in cars is common practice both privately and in industry. Smaller quantities of hazardous goods are also often transported by car in the chemical industry (e.g. by sales representatives carrying samples).

The transport of hazardous goods on roads is governed by transport regulations, regardless of whether the goods are transported by lorry or car. Nevertheless, cars are less suitable for transporting hazardous goods as they are primarily designed for transporting people.

All those involved in transporting hazardous goods must take the necessary precautions required according to the nature and severity of the hazards in order to prevent damage and, if damage does occur, to reduce it to a minimum.

Expect more from your floor.

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Storage and transport

The following requirements must be observed before departure:

1. Do not package goods together which could react dangerously with one another.
2. The cargo must be secured in such a way that little or no change to its position is possible during transport (e.g. with a tight fit, secured with lashing straps).
3. Must be stowed separately from the driver (e.g. in the boot).
4. Even distribution of load.
5. The packaging must be closed correctly.
6. Do not transport packages which are damaged or leaking or packages which have product adhering to their outside.
7. The vehicle must be equipped with a fire extinguisher (recommended for amounts of benzoyl peroxide ≥1 kg).
8. Check insurance coverage. Consult with the insurance company to ensure that there is sufficient coverage in the event of damage with hazardous goods.
9. Do not park vehicles in bright sunlight.
10. Observe quantity restrictions.

D) Transport (road)

– All papers required for transport must be carried on board.
– The driver must be instructed regarding the hazards and have corresponding training.
– Vehicles subject to labelling must not be used to transport persons. All other provisions (e.g. stopping and parking provisions) of the individual regulations must also be observed.

E) Unloading

– Smoking is absolutely prohibited during unloading.
– The load platform must be cleaned as required.
– If the vehicle no longer contains any hazardous goods, the warning signs and accident procedures sheets must be removed.

All provisions of the regulations must also be observed. In general, training is prescribed for personnel commissioned to transport hazardous goods with regard to accidents occurring during the transport of hazardous goods.

Finally, it should be noted that this list by no means covers the entirety of transport law. For further information, please contact the Silikal Hazardous Goods Officer.

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