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|----------|-----------------------------------|
| Basis | Casting resins for climbing holds |
| Resin | VP GM 2310 Comp. A |
| Hardener | VP GM 2310 Comp. B |
| Colour | opaque |

Applications

- Climbing holds, master, displacements

Properties

- suitable for production of climbing holds according EN 12572-3:2017
- abrasion resistant
- free of plasticizer
- good impact strength
- easily dyeable
- very well castable
- unfilled
- contains approx. 40 % raw materials from renewable sources

Processing data

| Product | | Mixture VP GM 2310 /Comp. A+B | Resin VP GM 2310 Comp. A | Hardener VP GM 2310 Comp. B |
|-----------------------|---------------------|--|-----------------------------|--------------------------------|
| Colour | | opaque | opaque | yellow transparent |
| Mixing ratio | p. b. w. | | 100 | 75 |
| Viscosity at 25°C | mPas | 1000 ± 100 | 1800 ± 100 | 20 ± 5 |
| Density at 20°C | g / cm ³ | 1,14 ± 0,02 | 1,13 ± 0,02 | 1,22 ± 0,02 |
| gel time 200 g / 20°C | min | L Hand casting 8 - 10 S Machine casting 2 - 3 | - | - |
| Curing time at RT | min. | L Hand casting approx. 60 S Machine casting 10 - 15 | - | - |

Physical data

| Properties | Inspect. requirem. | Unit | Value |
|------------------------------|--------------------|-------------------|------------|
| Flexural strength | EN ISO 178 | MPa | 90 ± 5 |
| Flexural elongation at break | EN ISO 178 | % | no break |
| Flexural modulus | EN ISO 178 | MPa | 2200 ± 100 |
| Impact resistance (Charpy) | EN ISO 179 | kJ/m ² | 85 ± 10 |
| Shore hardness | DIN ISO 7619-1 | Shore D | approx. 80 |
| Heat resistance (HDT) | DIN EN ISO 75 B | °C | approx. 80 |

Sales units (packages)

| | | | |
|-------|---------|--------------------|---|
| Units | Comp. A | VP GM 2310 Comp. A | 5,000 kg / 25,000 kg / 200,000 kg / 1000,000 kg |
| | Comp. B | VP GM 2310 Comp. B | 3,750 kg / 18,750 kg / 200,00 kg / 1200,00 kg |

Processing instructions

Component A (Polyol) must be thoroughly stirred before processing. The material and processing temperature should be between 18 and 25°C. Low temperatures can lead to brittleness and increased abrasion.

Important: The chemical reaction is slower in cold areas, so the reaction shrinkage is shifted to these areas, especially the contact surface with the mold. Therefore, the silicone mold should be preheated to approximately >30°C to prevent shrink marks/blistering, especially on handles with significantly different wall thicknesses on the surface and hidden contours. We recommend the production of Hollowback handles. For dual-texture handles/washers, the temperature should be >50°C to achieve a high-quality surface.

The surface quality and the lifespan of the handles are strongly influenced by the mold material used, especially slightly oily silicones create high-quality surfaces. We recommend using **ebalta** silicones.

In General

The casting compound VP GM 2310 is a whitish unfilled polyurethane casting resin. Depending on the type, the material is adjusted for both manual and machine casting of climbing holds and is suitable for producing climbing holds according to the requirements of the standard EN 12572-3:2017. However, we emphasize that the manufacturer must individually check its geometries.

The casting resin is easy to pour and molds fine rough contours. The material has very high abrasion resistance and good impact resistance. Component A can be colored by adding dyes. We recommend **ebalta** color pastes for opaque coloring. The material does not contain the following substances: asbestos, lead, formaldehyde, coal tar oils, carbonyls, polychlorinated biphenyls (PCBs).

The casting compound is plasticizer-free and contains approximately 40% raw materials from renewable sources. Mechanical data were determined on test specimens postcured for 8 hours at 80°C. Full chemical and mechanical loading should only occur after 7 days if the product has hardened at room temperature 20-23°C.

We recommend thermal post-curing of 8 hours at 80°C, as this significantly increases the abrasion resistance of the holds. The addition of fillers can further increase abrasion resistance.

Products labeled VP are experimental products. In this case, there may be slight changes in the technical data.

Storing

Store at 18-23°C. Isocyanate is stabilized against crystallization at low temperatures.

The components should be protected from direct sunlight to avoid discoloration. Opened containers must be tightly sealed and should be processed promptly to prevent moisture absorption.

Safety measure

Please follow the precaution instructions of the Government Safety Organisation of the chemical industry when working with this material. Please follow safety advices!

Waste Disposal

According to arrangement with local authorities cured material can be disposed as domestic or commercial waste.

Non-cured products are waste which is subject to inspection and has to be disposed accordingly.

In case of further questions please do not hesitate to contact our Department for Product Safety.

The instructions and recommendations are given in good faith and are based on long experience and careful tests. Since the conditions of use are beyond our control, and due to versatility of applications and working methods, we can't give any guarantee. All information are non-binding and are no guarantee for special characteristics or properties of the product. Despite information given from **ebalta** the customer has to make his own tests regarding applications and processing. If any special warranty is requested, written agreement on this subject is essential.