

HEGGEL® Flex 590

Soft Grade Castable Polyurethane Elastomer

You Build, We Protect!

Description:

HEGGEL Flex 590 is a two-component, castable, solvent-free, rubbery-elastic and flexible polyurethane. This cold-curing liquid product has almost no shrinkage. After full curing it will be sliceable and grindable, and shows high chemical resistance against concrete and aqueous alkalis. **HEGGEL Flex 590** is particularly well-suited for producing durable formliners designed for structured exposed concrete. Easy stripping of castings can be achieved using appropriate HEGGEL release agents.

Characteristics:

- High chemical resistance against aqueous alkalis
- Solvent-free
- Soft grade
- Sliceable and grindable after cure
- Shrinkage-free
- Cold-curing

Application Areas:

HEGGEL Flex 590 is ideal for creating flexible models, fittings, formliners, and moulds. It guarantees precise reproduction of surface contours and textures, even in complex cases involving undercuts or deep structural details.

Application Data:

Colour	Grey
Mixing Ratio	Base : Hardener = 9 : 1 (Parts by weight)
Pot Life	15 - 20 min (Measured for 200 g of mixture @21 °C)
Curing Time (Chemical and Mechanical Load)	7-10 days
Minimum Demoulding Time @ 21 °C	24 hrs

Technical Data:

Title	Standard	Value
Solids Content	-	100%
Viscosity	ISO 2555	Base: 2500 mPa.s
Density (Mix) @20 °C	-	1.30 g/cm ³
Tensile Strength	DIN 53504-S2	3.1 MPa
Tear Resistance	ASTM D624-B	11 N/mm
Elongation at Break	DIN EN 53504-S2	650%
Linear Shrinkage	-	0.1 - 0.2%
Shore Hardness A	DIN 53505	45
Thermal Resistance	-	Dry: 65 °C Under Concrete: 60°C

Note: Values achieved in sampling are typical guide values.

Packaging:

Double drums, 20 kg / 10 kg
 Double cans, 1 kg
 The hardener is enclosed in the lid.

Storage:

6 months in sealed original containers under dry and cool conditions at about 18 °C. Store in a dry place at ambient temperature and protect from moisture. Tightly re-seal opened containers and use the content as soon as possible.

1. Surface Preparation

The model substrate must be dry and clean. Absorbing substrates shall be sealed to speed up the following demoulding and prevent deficient curing. HEGGEL Sealant may be used for this purpose, provided that the surface is solvent-resistant.

In cases the surface has to be recovered to the original state, **HEGGEL Stripping Lacquer** can be applied after completing the moulding work and then remove it along with residues with plenty of water. Afterwards, 2-3 layers of **HEGGEL Mould Wax** are applied and each layer shall be fully dried.

2. Environmental Conditions

Working temperature must be kept between 15 °C – 30 °C and contact with moisture must strictly be avoided.

The built moulds must be protected from direct sunlight and any UV radiation.

3. Mixing

Stir up the base part thoroughly and then decant the hardener into the based part and mix them to get homogenous mixture. Transfer the resin / hardener mixture into a clean container and mix briefly once again.

Incorporation of large amount of air, should be prevented. After completing the mixing process, the material must be applied within the pot life period (15-20 minutes).

4. Application

HEGGEL Flex 590 can be used with full cast or front cast method.

In case applying several layers of elastomer is required, the previous layer shall be still slightly sticky and meanwhile cured adequately to bear the load of following application. If the surface is fully cured, it must be roughened by grinding before applying next layer.

The shortest demoulding time is 24 hours.

Note: To ensure dimensional stability and maximum service life, **HEGGEL Flex 590** moulds should be stored in their supporting

frames with air circulation. Prolonged compression can cause irreversible deformation. Additionally, the moulds must be protected from UV radiation and direct sunlight.

5. Cleaning

Use dry, absorbing cloths for cleaning, if necessary, **HEGGEL Cleaners** shall be utilized. Immersion in solvent is not sufficient.

6. Safety Measures

Skin and eye should be protected from material splashes and proper ventilation shall be provided in the working place.

The product is subject to the hazardous material, operational safety and transport regulations for hazardous goods.

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the latest edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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