

# ElastoCrete 100

## Polyurethane Binder and Sealer



**DESCRIPTION** • *ElastoCrete 100* is a two component, high build, high solids, UV resistant polyurethane resin coating that cures to a clear glossy finish. *ElastoCrete 100* is specifically formulated with specialty raw chemicals for use in decorative applications.

**USES** • *ElastoCrete 100* is formulated for high adhesion strength and high performance for use as a binder with decorative aggregates such as glass beads, colored quartz, crushed marble, and pebbles. Decorative aggregates mixed with *ElastoCrete 100* are casted on concrete surfaces or compacted road base to form highly durable decorative flooring finishes such as glass, stone and quartz carpets. *ElastoCrete 100* may also be used as the sealer coat for concrete finishes.

### ADVANTAGES

- ✓ High adhesion strength.
- ✓ High solid content.
- ✓ UV resistant.
- ✓ High clarity for decorative applications.
- ✓ Easy to apply.
- ✓ High gloss finish.
- ✓ High chemical resistance.

**LIMITATIONS** • Never apply to new concrete surfaces before they have been allowed to cure for a minimum of 28 days.

### PHYSICAL PROPERTIES

Specific Gravity	1.00 ± 0.05
Solid Content	83%
Full Cure	7 days at 20°C 5 days at 35°C
Shore D Hardness ASTM D 2240	>50
Physical State	Part A: Clear Liquid Part B: Clear Liquid
Odor	Part A: Oily Part B: Mild Characteristic
Boiling Point	Part A: >150°C Part B: >120°C
Flash Point	Part A: 181°C Part B: 39°C
Solubility	,Part A: Insoluble in water soluble in organic solvent ,Part :B Reacts with water ,soluble in esters, ketones chlorinated and aromatic hydrocarbons

Specific Gravity	Part A: 1.02 Part B: 1.07
Viscosity @23°C	Part A: 3000mPas Part B: 300mPas
VOC (USEPA 24)	g/L 8.9
Flexural Strength (ASTM D7264)	1.26 MPa
Dry Slip Resistance (ASTM E303) – w/ 2.5 mm Wadi Gravel	R13 Dry R12 Wet

**CHEMICAL RESISTANCE** • Fully cured *ElastoCrete 100* samples have been tested for chemical resistance to ASTM D 1308 and found to have no discoloration, change in gloss, blistering, softening, or swelling to the following materials:

- Ethyl Alcohol (50% vol.)
- Vinegar (3% Acetic Acid)
- Alkali Solution (pH 11.5)
- Acid Solution (pH 2.5)
- Soap Solution
- Detergent Solution
- Volatile Fluid
- Petrol
- Fruit
- Vegetable oil & grease.
- Tea & coffee
- Distilled Water (cold and hot)

**COVERAGE** • Coverage will vary according to the size, shape and gradation of the aggregates used, surface roughness/level and job conditions. For application as a binder, *ElastoCrete 100* should only wet the surface of the aggregates to provide the required adhesion. Trials should be made with the particular aggregates to be used as the mixing ratio could vary depending on the size, shape, and gradation of the aggregates, but typically the ratio of *ElastoCrete 100* to the aggregates should be around 6% and not exceed 10% by weight. Typically, with most natural stones of 2-5 mm size, a coverage rate of approximately 17.5 kg/m<sup>2</sup> (mixed binder and aggregates) at 10 mm thickness can be expected.

For applications where *ElastoCrete 100* is used as a sealer coat, the coverage rate is approximately 6.5 m<sup>2</sup>/liter at a dry film thickness of 100 microns.

**SURFACE PREPARATION** • All surfaces should be clean, dry and free from dust and other contaminants. Wet substrates should be sponge dried to remove all free surface water then dried thoroughly.

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Contamination may be removed from concrete surfaces by grinding, sandblasting, scarifying, or metallic abrasive blasting. A textured surface profile is preferable in the case of thin applications of the binder/aggregate mix to aid in the adhesion. Smooth surfaces should be roughened by light grinding or other mechanical means.

New concrete floors: should be at least 28 days old and have a moisture content of less than 5%. Excessive laitance should be removed by mechanical methods. Dust and other debris should be removed by vacuum cleaning.

Old concrete floors: damaged areas or surface irregularities should be repaired using *MortCrete 3000*.

Epoxy Screeds: high spots or trowel marks should be rubbed down. Remove dust and debris by vacuum cleaning.

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**MIXING** • The entire contents of the hardener container should be poured into the base container and the two materials mixed thoroughly for at least 3 minutes. Use a heavy-duty slow speed power drill with a jiffy mixing blade. Mix the two components in the quantities supplied taking care to ensure hardener container is scraped clean.

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**APPLICATION** • Do not apply if ambient temperature is expected to drop below 0°C or exceed 40°C. Do not apply if ambient humidity is above 87% especially on cooler days (<10°C). Substrate temperature must be 3°C above the dew point temperature. Do not apply under wet conditions or if rain is expected in the proceeding 24-hours.

*ElastoCrete 100* is used either as a binder mixed in with decorative aggregates or as a clear sealer.

As a binder: Pour the mixed parts A and B into the container holding the aggregates. For small quantities, a slow speed hand mixer may be used; for large quantities it is recommended to use a drum mixer in order to insure that *ElastoCrete 100* thoroughly wets the surface of the aggregates. For best results, it is not recommended to mix more than what can be applied in 15-20 minutes. Mix the aggregates and the resin for a maximum of 5 minutes, then pour the aggregate / resin mix on a structurally sound substrate such as a compacted subgrade or pre-primed concrete surface for bonded applications while the primer coat is still tacky; it is recommended to prime concrete surfaces with *EpoPrime EP1* or *EpoPrime 100*. Use screed guides on the floor to spread and screed the mix to the desired thickness, then use a trowel to compact the material properly. Use of a light weight power trowel

might be possible in some cases to ensure thorough compaction.

As a sealer clear: After thorough preparation of the surface, *ElastoCrete 100* can be applied by brush or roller. A 6 mm nap roller is recommended for smooth surfaces. For rough surface a 9 - 12 mm nap roller is preferred. Two applications of material are recommended for complete protection, especially on highly porous surfaces. Always apply in thin coats and maintain a wet edge. Allow 24-48 hours drying time between coats. Do not allow foot traffic for 24 hours after final application. Area may be opened to heavy foot traffic after a minimum of 72 hours.

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**CLEANING** • Tools and equipment may be cleaned with an organic solvent.

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**STORAGE & SHELF LIFE** • Product should be stored at 25°C in dry conditions away from direct sun light. Shelf life is approximately 12 months from date of purchase in original unopened container at specified storage temperature.

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**SAFETY PRECAUTIONS** • Flammable. The application of material should be under good ventilation. Avoid inhalation of the vapors. Use goggles and vinyl gloves. In case of contact with eyes, rinse immediately with plenty of clean water, do not use solvent and seek medical attention immediately.

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**PACKAGING** • 1.5 kg and 4.5 kg kits.

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### Creative Concrete Concepts

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