

Product Data Sheet:

DEEP DIVE

EXTRA DEEP ENCAPSULATING CASTING RESIN

3kg, 7.5kg, 15kg & 37.5kg kits

Clear

Deep Dive is a two-component casting resin that produces a crystal clear, high gloss finish and is particularly suited to deeper casts in one pour. Ideal for resin river tables, wood/resin projects, flower preservation and encapsulation.

Eli-Chem's Deep Dive is an unaccelerated casting system which offers a long open time for precise article placement and has excellent self-degassing properties. Due to the longer open time, Deep Dive can be poured up to 15kg or 85mm thickness (whichever comes first) in one pour. It also avoids high exothermic reaction and the resulting shrinkage after curing. It has good UV resistance, clarity and transparency making the resin system suitable for just about any deep creative project.

- Solvent and odour free
- Safe to use without use of face mask
- High transparency
- As deep as 85mm/15kg one pour thickness, achievable at 18°C
- Good UV resistance
- Non-flammable

HOW TO USE IT:

Mixing

MIX BY WEIGHT ONLY Mixing Ratio 2:1 e.g. 200g resin to 100g hardener. The mixing ratio must be accurately followed. It is not possible to change the ratio as this would result in lower mechanical properties and the resin not curing properly. Mix by hand or with electric mixer and avoid incorporating too much air. Regularly scrape the sides, base and corners of the mixing vessel to ensure full homogeneity. Mix until it is a uniform colour & consistency (usually 3-4 mins) and leave the mixture for 10-15mins to help self-degassing before pouring into mould.

The maximum volume that can be poured in one go is 15kg or up to 85mm at 18°C, whichever comes first. The mixed resin can be tinted with our resi-TINT, resi-TINT MAX, resi-METAL or resi-TINT+ Metallic Powders to make your artwork shine.

Epoxy systems tend to heat up much faster in a pot than as a thin film. Mix only the necessary amount usable within the pot life. Room temperature and constant temperature are important factors in the casting of Deep Dive. There is a link between room temperature, volume of cast resin and curing speed. The higher the room temperature and/or larger the mass will speed up curing. Curing too fast is to be avoided and will create an exothermic reaction which can froth or result in optical discolouration.

Application

The mixed product can be poured into a watertight mould. The mould can be plastic or made of silicone rubber. Moulding can be carried out by gravity or under vacuum. Temperature should be between 18-22°C, humidity level below 70%. Wood or porous surfaces must be sealed before pouring. One of Eli-Chem's faster setting resins such as MasterCast or totalCAST will be ideal. Ensure your piece is perfectly flat and level, otherwise the resin will run to the lowest point.

A 2:1 mix will provide a hard casting suitable for manufacture of fancy shapes, decorative items etc. Should a new mix be applied onto cured resin, the contact surface should always be sanded in order to enhance adhesion.

Once the resin is mixed and poured into the mould, gently pass warm air from a heat gun or hair dryer on the slowest speed setting from approx. 20cm to assist in removal of any bubbles generated during mixing. If you use alcohol inks DO NOT use a flame to remove bubbles.

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DUST:

You will need to protect the piece from dust accumulation whilst curing.

FINISHING:

Once demoulded, the resin in contact with the mould sides may need to be polished to achieve perfect clarity. A range of sanding and polishing products are available from Eli-Chem. Please ask for more details.

MECHANICAL & PHYSICAL PROPERTIES:

approx. values

Viscosity @ 25°C			~220mPa.s
Mixing ratio			2 : 1 by weight
Colour			Transparent
Reactivity on 1,500g @ 25°C			~17 h
Shore hardness			
after 7 days, 23°C	ISO 868	Shore D1	73
after 14 days, 23°C			78
Flexural modulus	ISO 178		630MPa
Impact strength (CHARPY)	ISO 179		82kJ/m ²
Pot life		12hours (2kg mixed mass at 18°C)	
Can be de-moulded			5-7 days
Full cure			14-21 days

SHELF LIFE/STORAGE:

One year in sealed containers. Keep containers away from heat or cold. If stored in lower temperatures crystallisation of the resin can occur. Warm the bottle in a lukewarm water bath or near (not on) a heater to a maximum of 40°C and agitate the bottle regularly to melt the crystals completely. Allow product to cool back to room temperature before use. Performance will be unaffected.

Containers must be tightly closed after use to prevent moisture ingress.

SAFETY:

Standard proactive safety hygiene and responsible procedures apply. Wear goggles, gloves and work in a well-ventilated room. Wear a respirator when sanding cured resin to avoid dust particle inhalation. Avoid skin contact (if there is contact wash thoroughly with soap and water). Do not eat, drink or smoke whilst working.

Refer to the Safety Data Sheet for full information on correct handling and application of the product.