

Product Data Sheet

CasTech Rep EPT

Nov-2025, Ver. 01.01



Three-Component Solvent-Free Epoxy System

DESCRIPTION

CasTech Rep EPT is a three-component, solvent-free epoxy resin system designed for pile encapsulation, structural treatment and waterproofing. Supplied in pre-weighed, ready-to-use kits, it offers high fluidity for effortless application and deep penetration.

TYPICAL USES

- Encapsulation of pile tops to prevent water ingress
- Waterproofing against capillary action and reinforcement corrosion
- Pourable epoxy repair for cracks and spalls
- Compatible with torch-on, self-adhesive and liquid-applied membranes

ADVANTAGES

Key advantages:

- 100% solvent-free – no shrinkage, eco-friendly
- Rapid hardening – minimizes downtime
- Pre-proportioned kits – ensures consistent mixing
- High mechanical strength – resists impact and vibration
- Humidity-tolerant curing – performs in damp conditions
- Chemical resistance – withstands acids, alkalis and groundwater
- Long-term durability – maintains pile integrity

STANDARDS

- BS 6319 (Testing of resin compositions for construction)
- ASTM C881 (Epoxy-resin-base bonding systems)
- EN 1504-5 (Protection and repair of concrete structures)

TYPICAL PROPERTIES

Components	Part A (Base), Part B (Hardener), Part C (Filler)
Form	Flowable mortar
Colour	Black
Mixed Density (ASTM D1475)	2.10 ± 0.10 kg/L
Pot Life	45 ± 10 minutes
Compressive Strength (BS 6319-2)	> 75 N/mm ² (7 days)
Flexural Strength (BS 6319-3)	25 N/mm ² (7 days)
Tensile Strength (BS 6319-7)	15 N/mm ² (7 days)
Bond Strength (ASTM D4541)	> 2.5 N/mm ² (7 days)
Solid Content	100% (solvent-free)
Application Temperature	+5°C to +40°C
Water Penetration (BS EN 12390-8)	Nil

SURFACE PREPARATION

Ensure surfaces are dry, clean and free of grease, laitance or loose particles. Mechanically prepare concrete (hacking/grit blasting). Repair defects with CasTech Epoxy Patch and protect exposed rebar with CasTech Zinc Primer.

MIXING

Pour Part B (Hardener) entirely into Part A (Base) and mix for 1 minute with a slow-speed drill. Gradually add Part C (Filler) and mix until uniform.

APPLICATION

Use leak-proof formwork. Apply within the pot life and spread evenly by mechanical means. Thickness range: 10 – 75 mm (single layer).

COVERAGE

0.2 m²/L at 5 mm thickness.

COMPATIBILITY

- Substrates: bonds to concrete, steel and primed metals when properly prepared
- Waterproofing membranes: compatible with torch-on, self-adhesive and liquid-applied systems
- Temperature range: apply between +5°C and +40°C

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LIMITATIONS

- Avoid partial mixing or use in flowing water
- Pot life reduces at high temperatures (> 40°C)
- Not suitable for continuous immersion in aggressive chemicals
- Avoid application on wet or frozen surfaces
- Test compatibility when used with other epoxy or polyurethane systems

PACKAGING, STORAGE AND SHELF LIFE

12 L and 20 L kits (pre-weighed components).

HEALTH AND SAFETY

PPE: Suitable protective goggles, gloves and mask must be

worn.

Precautions: In case of contact with eyes, rinse immediately with plenty of water; in case of contact with skin, wash off immediately with soap and water. If swallowed, seek medical attention immediately.

Hazard: Regarded as non-hazardous for transportation.

Disposal: Do not reuse containers. Dispose of as per local rules and regulations.

Additional information: Refer to MSDS (available on request).

TECHNICAL SUPPORT

CasTech provides on-site assistance and consulting services on projects when requested. Technical data sheets on other CasTech products and guidance on their use are available on request.

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