

PRODUCT BULLETIN

ALPHATEC® 240

Issue Date: 28 June 2017 Revised: 21 August 2019

EPOXY PUTTY COMPOUND

General Description

ALPHATEC® 240 is a solvent-free, two-component epoxy putty which is designed for ease of hand mixing with its 1:1 ratio by volume, and rapid cure in most conditions, including underwater. It is widely used for sealing forms for grout containment, on steel or concrete and for crack sealing where injection pressures are low.

ALPHATEC® 240 is green with semi gloss finish after mixing. It displays excellent resistance to corrosion in:

- Marine environments
- Fresh water
- Water pipes
- Tanks

Moreover it can be used as electrical insulation, is self-priming and applied by hand under water. After curing, the coating is very hard and resistant to mechanical and abrasive damage.

Features

- Excellent corrosion resistance to marine/chemical environments, sea and fresh water immersion, and buried pipes/tanks
- Excellent resistance to mechanical damage, abrasion, and cathodic disbondment
- Excellent resistance to electric insulation
- Applicable over 5mm as a single coating

Application and Finish

ALPHATEC® 240 must be directly applied on clean, properly prepared steel and concrete (see below). The finish is semi gloss which will discolour upon exposure to sunlight. Resistance to dry temperature: 110°C (continuous exposure) and 125°C (non-continuous exposure).

Recommended Uses

- External surfaces for sea lines/pipelines (either buried or immersed in sea or fresh water)
- Steel-coated posts, concrete piers
- Jacketed coatings on offshore platforms
- Coating of submerged areas, topsides, splash areas of any steel or concrete surfaces to be immersed in sea or fresh water

Surface Preparation, Mixing, and Application

- Remove oil and grease from surface to be coated
- **STEEL:** A new surface to be immersed in fresh and/or sea water should undergo abrasive blasting (ISO 8501-1, SA 2 ½) to get a 70 µm blast profile. An old surface to be immersed in fresh or sea water should be mechanically brushed or air-needle scaled to remove all fouling and aged paints, followed by abrasive 1 PRODUCT BULLETIN ALPHATEC® 240 Issue Date: 28 June 2017. Revised: 12 January 2023. blasting (ISO 8501-1, SA 2 ½) to get a 70 µm blast profile. Surfaces not to be submerged should be blasted (ISO 8501-1, SA 2 ½) to get the same results.
- **CONCRETE:** A concrete surface must be cured 28 days at 24°C and 50% RH beforehand. Prepare surfaces according to ASTM D4258 (Surface Cleaning of Concrete) and ASTM D4259 (Abrading Concrete). Voids may require surfacing. A new surface immersed in fresh and/or sea water should be blasted or abraded to get a coarse sandpaper-like surface profile. An old surface to be immersed in fresh or sea water should be mechanically brushed or air-needle scaled to remove all fouling and aged paints, followed by abrasive blasting to get a a coarse sandpaper-like surface profile. Surfaces not to be submerged should be blasted or abraded to get the same results.
- **MIXING:** Power mix base and hardener separately, then combine them to obtain a homogeneous green colour. The relative base : hardener ratios shall be 1 : 1 (either by weight or volume). Thinning is not required, because it may cause detachment of applied coatings, thus voiding test results such as adhesion, mechanical resistance, and electrical insulation
- **APPLICATION:** Protect hands with rubber gloves, apply in calm sea conditions only. Do not apply during weaving sea or when sea water is flowing at a speed higher than one knot. The temperature of water for vertical applications should be between 5 and 25°C

Recommended Dry Film Thickness and Coverage

A single coating may range from 3 to 5 mm. However, thicknesses as high as 15 mm can be easily reached, if needed. Theoretical area coverage may vary from 3 to 5 litres per m². However, material loss during mixing and application must be taken into account when evaluating job requirements.

Drying Time and Curing

- Drying at 24°C: four hours (dry to touch). Full drying may take up to five days.
- Underwater drying at 13°C: 10 hours (dry to touch). Full drying may take up to 10 days

Flash Point (PMCC) and Solid Content

Base (yellow): 61°C. Hardener (blue): 61°C. The solid content is 100% (by volume).

Shelf Life and Pot Life

The shelf life is 24 months from the manufacturing date, when kept in sealed container. ALPHATEC® 240 must be stored in cool, dry conditions (best between 4 and 35°C, relative humidity between 0 and 90%) and kept away from direct sunlight or heat. Ideally, ALPHATEC® 240 should be stored at 24°C. The pot life is 60 minutes at 25°C and decreases as external temperature increases. Apply within 15 minutes and keep the mixed product under water.

Chemical Resistance

Exposure	Immersion	Splash & Spillage	Fumes
Dilute acids	Fair	Fair	Fair
Dilute alkalis	Fair	Fair	Fair
Petroleum-based products	Good	Good	Good
Salts	Excellent	Excellent	Excellent
Water	Excellent	Excellent	Excellent

Cleanup and Safety

- CLEANUP: Use MEK. In case of spillage, dispose according to local, applicable regulations.
- SAFETY: Read and follow all caution statements about ALPHATEC® 240 on its SDS.
- ALPHATEC® 240 may contain flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded properly. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and wear insulated safety boots.

ALPHATEC ENGINEERING SL Calle Oeste 11, 46130 Massamagrell (Valencia), Spain. Alphatec Engineering licenses various Alphatec group companies to manufacture these products in specific markets. Consult your local supplier or the group website www.alphatec-engineering.com for more information. In the interests of continually upgrading our products, Alphatec Engineering SL reserves the right to change these specifications without notice.