Underwater Curing Magmapoxy

Underwater Curing Magmapoxy is a two-part, solvent-free epoxy adhesive designed to cure effectively even in the presence of water. It forms a tough, durable polymer surface with strong adhesion to treated metal, timber, and concrete. Ideal for underwater or damp conditions, it is used for repairs on boat hulls, tanks, pipelines, and submerged concrete or steel structures, including tidal zone wharf piles.

While it adheres to wet or oily surfaces and tolerates some contamination, proper surface preparation—removing loose corrosion, mill scale, and debris—is still important for long-lasting performance.

A three-part, solvent-free epoxy coating designed for underwater and wet/oil-contaminated surface application. Once cured, it forms a durable, corrosion-resistant barrier coating. The kit compromise of three components:

1. Epoxy Resin / Part A
2. Epoxy Curing Agent / Hardener / Part B
3. Reinforcement / Rebuild Filler Composite

Key Benefits:

- Two-component system: Requires easy 4A:1B mixing of resin and hardener.
- No hot work required / COLD CURING
- Cures underwater or on damp/oily surfaces
- Excellent adhesion to metallic & non-metallic surfaces such as timber and concrete
- No shrinkage or expansion
- Prevents galvanic corrosion
- Solvent-free = safer handling
- Tough and durable once cured, with good mechanical strength

Applications:

- Splash zone corrosion protection on offshore structures
- Submersible pumps, transformers, and valve coatings
- Pipework and tank internals/exteriors repair
- Emergency sealing of oil/water leaks, even when ongoing leakage
- Repairing or coating underwater concrete structures
- Sealing joints/flanges under wet or submerged conditions
- Underwater repairs such as Boat hulls, Pipelines, Tanks, Columns and Pillars
- Long-term repairs to oil or water-exposed surfaces.

Technical Specifications:

Property	Details
Mixing Ratio	4:1 by Weight or Volume – Plus Ceramic as required to your desired Viscosity
Application Temperature	Room temperature (typically 10°C to 30°C)
Curing Conditions	Cures underwater or in wet/oily conditions
Full Cure Time	~24–48 hours (depending on temperature and thickness)
Pot Life	~15–30 minutes at 20°C
Coverage	~1.5 m²/kg at 500 micron (0.5 mm) thickness
Chemical Resistance	Excellent against water, oils, and many chemicals
Adhesion Strength	High (especially to damp steel, concrete, brick)
Shelf Life	12 months (unopened, cool dry storage)

SHIMICOAT Splash Zone Protection
What Are Splash Zones?

- Zones affected by tidal fluctuations (high/low tide areas)
- Found in offshore platforms, risers, coastal structures
- Vulnerable to corrosion, erosion, abrasion, and structural stress

Challenges in Splash Zones

- Corrosion: Even under concrete jackets due to seawater ingress
- Erosion: From continuous water flow
- Abrasion: Caused by debris, sediment, ice, and waves
- Structural Damage: Due to high pressures, impacts, and wear
- Repair Limitations: Traditional methods (e.g. welding) are costly, risky, and ineffective under wet/oily conditions

SHIMICOAT's Solution

SHIMICOAT provides cold-applied, surface-tolerant, underwater-curing polymer technologies that offers:

- Underwater curing & strong adhesion on wet/oily/contaminated surfaces
- 100% solids = no shrinkage, low VOCs, minimal health risks
- No hot work required – safe & simple with hand tools
- Durability & cost savings over replacement
- Proven track record with decades of global application
- Compatible with cathodic protection and sheathing systems

SHIMICOAT Key Products

- 2-part, surface-tolerant, moisture-tolerant epoxy
- Multi-purpose repair epoxy composite
- Cures underwater, adheres to wet/oily surfaces
- Ideal for splash zones, submersibles, leaks, tanks, bunds, valves
- Cures at 5°C, ideal for cold climates
- Strong adhesion, corrosion protection
- For emergency/field use when grit blasting is not possible
- Cures rapidly, bonds to wet/oily/underwater surfaces
- Ideal for: pipe sealing, marine gear, submerged structures, leak repairs

Common Applications

- Splash zone corrosion prevention (risers, legs, tanks, pumps, valves)
- Structural reinforcement (wall thinning, cracks, disbondment)
- Underwater and oil-contaminated surface repairs
- Flange and joint sealing
- Repair kits and emergency maintenance (engines, sumps, marine vessels)

Why Choose SHIMICOAT?

- Safe: Cold-curing, no hot work, easy to apply
- Durable: Long-lasting even under marine stress
- Cost-Effective: Avoids replacement, reduces downtime
- Environmental Compliance: Prevents spills and fines
- Proven Performance: Backed by 20+ years of field-tested success

Combatting Corrosion in Offshore Environments with SHIMICOAT
The offshore environment is inherently corrosive. Continuous exposure to wet, harsh atmospheres—especially in splash zones and underwater areas—combined with erosive forces from waves and floating debris, accelerates the degradation of equipment and structural components. If left untreated, corrosion can lead to severe structural damage, leaks, ruptures, costly downtime, and significant environmental risks.

SHIMICOAT In-Situ Protection & Repair Systems
SHIMICOAT offers innovative in-situ solutions specifically designed for splash zones and submerged structures such as risers and platform legs. These systems require minimal surface preparation and are engineered to perform in some of the most challenging marine environments.
In addition to our comprehensive product range, SHIMICOAT provides **surface-tolerant technologies** that are highly effective even on wet, oily, or sweating substrates. These products are engineered for exceptional adhesion to steel, regardless of immersion conditions.
A prime example is **SHIMICOAT 1005UW**, a brush-applied product that displaces water on contact, forming a superior bond. It eliminates the need for hot work, cures underwater, and offers robust protection against erosion and corrosion.

Why Choose SHIMICOAT?

- Cures underwater and in wet conditions
- No hot work required
- Minimal surface preparation
- Strong adhesion to steel
- Long-lasting, permanent protection
- Proven performance globally

SHIMICOAT's surface-tolerant repair systems reduce maintenance costs and extend the life of your assets—above water, in splash zones, and underwater.

Get in Touch
For more information on SHIMICOAT's splash zone and underwater solutions, contact your local SHIMICOAT representative today.

STORAGE

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- Store both components away from direct sunlight and sources of heat, as elevated temperatures will severely reduce pot life.
- In their original, unopened containers, each component has an indefinite shelf life.
- However, prolonged storage may cause settling of contents. Ensure thorough mixing before use to restore a uniform consistency.

The products shall be stored out of direct sunlight and heat at all times. The standard shelf life of the product is 24 months, mix uniformly for 3 minutes prior to use.

DISCLAIMER