ID/UW COATING

DESCRIPTION

ThinTech ID/UW Coating is a two-component, high-performance, solvent-free, self-priming, surface-tolerant epoxy coating designed for corrosion and abrasion protection in severe service. It adheres to properly prepared dry, damp, wet-blasted and submerged substrates and can cure underwater.

APPLICATIONS / SURFACES

Surfaces: Steel, structural steel, concrete, damp substrates, wet-blasted steel, cold or sweating steel, and properly prepared existing coatings.

Applications: Internal-diameter pipelines, submarine and underground pipelines, offshore and marine structures, sheet piles, jetty piles, wastewater and underground tanks, tidal-zone rehabilitation, and submerged steel or concrete structures.

CHARACTERISTICS

Resin Type: Two-component epoxy

Finish: Semi-gloss / matt*

Volume Solids: 100% (ASTM D2697)

DFT: 125-175 microns per coat

Mix Ratio: 4:1 by weight

No. of Coats: 2 or 3

Pot Life: 45 min at 30 C

Shelf Life: 1 year

Theoretical Coverage: 4.8 m2/kg at 150 microns wet / 150 microns dry

Temperature Resistance: Immersion 60 C / non-immersion 93 C

Performance: Fresh-water and seawater resistance; impermeable barrier; resistance to acids, alkalis, solvents, salt water and water; strong adhesion to dry and wet surfaces; underwater curing; low-temperature cure.

REFERENCE TEST DATA - ASTM METHODS

Scribed salt spray: 3,000 h (B117)

Unscribed salt spray: 4,500 h (B117)

Pull-off adhesion: 1,843 psi (D4541)

Impact resistance: 18 J, no crack (D2794)

Water immersion: 6,000 h (D870)

Cathodic disbonding: 7.84 mm (G8)

SIRIM QAS report 2025CE3971, tested coating system M9-B. Full methods, results and test conditions are on page 5.

**Finish may appear matt when cured underwater or beneath standing water.*

Chemical Resistance: Very good to excellent resistance to acids, alkalis, solvents, salt water and water, subject to service concentration and exposure conditions.

Easy Application: Self-priming and surface tolerant. Suitable for maintenance and rehabilitation where damp, wet or submerged conditions make conventional coatings difficult to use.



For pipeline, marine, offshore or industrial assets requiring corrosion protection in wet and difficult-service conditions, ThinTech ID/UW provides a 100% solids barrier that can cure underwater.

For more information:
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SURFACE PREPARATION

Steel: Remove wax, oil and grease by SSPC-SP1 solvent cleaning. Remove soluble salts, dirt and dust by freshwater washing and dry brushing. Remove scale and take loose or flaking coating back to a firm edge.

Atmospheric Service: Hand- or power-tool clean to minimum St 2 (ISO 8501-1) or SSPC-SP2. Avoid polishing the surface.

Immersion Service: Abrasive blast to minimum Sa 2 1/2 (ISO 8501-1) or SSPC-SP10 with a 50-75 micron average profile. Apply promptly after preparation to prevent oxidation or recontamination.

Maintenance / Repairs: Ultra-high-pressure hydro-jetting is acceptable for previously painted surfaces. For small repairs, dry abrasive blast to Sa 1 or power-tool clean to St 3, as appropriate.

Concrete: Ensure the surface is sound. Remove laitance and contaminants by wire brushing, acid etching, sweep blasting, wet blasting or high-pressure water jetting.

APPLICATION

1. Mixing & Thinning: Mix 4 parts Part A to 1 part Part B by weight until uniform. For above-water spray only, use compatible epoxy thinner up to 10% where required. Do not thin for underwater application.

2. Application Method: Airless spray is recommended above water using a 0.53-0.63 mm (21-25 thou) tip at 1,600-2,300 psi. Conventional spray, brush and roller may also be used. Underwater, apply by brush or roller.

Best Practices: The surface must be clean, sound and free of oil, grease, soluble salts, loose rust, laitance and other contaminants. Prepare welds, seams, edges and defects before application. Apply promptly after preparation.

TECHNICAL DATA

DRYING TIME & APPLICATION CONDITIONS	15 C	25 C	35 C
Touch Dry	6 hours	4 hours	3 hours
Hard Dry	12 hours	9 hours	6 hours
Minimum Overcoat	16 hours	9 hours	6 hours
Maximum Overcoat	Indefinite	Indefinite	Indefinite
Pot Life	1 hr 15 min	1 hour	40 min

Drying times vary with temperature, film thickness, ventilation and service conditions.

TECHNICAL DATA (CONTINUED)

PHYSICAL & SHIPPING PROPERTIES	
Resin / Type	Two-component, solvent-free, surface-tolerant epoxy
Volume Solids	100% (ASTM D2697)
Theoretical Coverage	4.8 m2/kg at 150 microns wet / dry
Dry Film Thickness	125-175 microns per coat
Finish	Semi-gloss / matt when cured underwater
Components / Mix Ratio	2 components / 4:1 by weight
Pot Life	45 minutes at 30 C
Standard Packing	5 kg set (4 kg Part A : 1 kg Part B)
Shelf Life	1 year
Dry Temperature Resistance	Immersion 60 C / non-immersion 93 C

CHEMICAL RESISTANCE GUIDE

Exposure	Immersion	Splash & Spillage	Fume
Acids	Very good	Excellent	Excellent
Alkali	Very good	Excellent	Excellent
Solvents	Very good	Excellent	Excellent
Salt water	Excellent	Excellent	Excellent
Water	Excellent	Excellent	Excellent

TYPICAL COATING SPECIFICATIONS

Substrate / Surface	Coat 1	Coat 2	Coat 3
Steel immersion - abrasive blasted Sa 2 1/2	ID/UW	ID/UW	As specified
Steel maintenance - power-tool cleaned St 3	ID/UW	ID/UW	As specified
Wet / tidal-zone repair - wet blast or hydro-jet	ID/UW	ID/UW	As specified

NOTES

These coating specifications are typical. Follow the approved project specification for the substrate, service environment and required total film thickness. Common to epoxies, prolonged sunlight exposure can cause yellowing or chalking without reducing protective performance. Where appearance is important, use a suitable weather-resistant finish coat.

STORAGE & CLEAN UP

Storage: Store in a cool, dry, shaded area in original closed containers. Shelf life is 1 year under recommended storage conditions.

Clean Up: Use a compatible epoxy equipment cleaner before the material cures.

SAFETY PRECAUTION

Avoid contact with eyes and skin. Wear suitable protective clothing, gloves, eye protection and respiratory protection appropriate to the application method. Ensure adequate ventilation. Do not breathe vapour or spray mist. Keep away from ignition sources and follow the current Safety Data Sheet for handling, first aid, transport and disposal information.

FIRST AID

Eyes	Flush immediately with clean water and obtain medical advice.
Skin	Wash thoroughly with soap and water or approved industrial cleaner.
Inhalation	Move to fresh air and keep the person at rest.
Ingestion	Do not induce vomiting. Obtain immediate medical attention.

DISCLAIMER

This data sheet provides general technical guidance. Product performance depends on substrate condition, surface preparation, application method, film thickness and service environment. The user must confirm suitability for the intended use and comply with the current specification and Safety Data Sheet. Published information may be revised as product development and testing continue.

REFERENCE TEST DATA - ASTM METHODS

SIRIM QAS International Sdn. Bhd., report 2025CE3971, records the following results for protective coating system M9-B. The tested system was applied in two coats at 200 microns nominal dry film thickness per coat. The report assesses compliance with PETRONAS PTS 15.20.03 (June 2019).

Test	Method / duration	Reported result	PTS outcome
Salt spray, scribed	ASTM B117-19; rated ASTM D1654-24; 3,000 h	Rating 7	Comply
Salt spray, unscribed	ASTM B117-19; rated ASTM D1654-24; 4,500 h	Rating 10	Comply
Pull-off adhesion	ASTM D4541-22	Mean 1,843 psi (10 dollies; 437 microns average coating thickness)	Comply
Impact resistance	ASTM D2794-93(2024)	18 J; no cracking (431 microns average DFT)	Comply
Water immersion	ASTM D870-15(2020)e1; 6,000 h, distilled water at 27 +/- 2 C	ASTM D610 rust grade 10; ASTM D714 blister rating 10; no other visible defects	Comply
Cathodic disbonding	ASTM G8-24, Method A; 30 days	Average disbonded diameter 7.84 mm (criterion: less than 10 mm)	Comply

TEST CONDITIONS & SCOPE

Salt spray conditions: 35 C, 5% NaCl, pH 6.8. Water immersion: 6,000 h in distilled water. Cathodic disbonding: 30 days, with individual measurements of 7.01, 9.25 and 7.27 mm. Surface preparation for the tested system was identified as SSPC-SP-WJ 1.

The report lists pull-off acceptance thresholds of 500 psi for splash-zone exposure and 300 psi for atmospheric exposure. Impact testing used a 12.7 mm punch on a 2 mm carbon-steel substrate. Rust grade 10 indicates no more than 0.01% surface rust; blister rating 10 indicates no blisters.

INTERPRETATION

The results are from SIRIM QAS report 2025CE3971 for coating system M9-B, prepared and applied as specified above. The report records compliance with the cited PTS 15.20.03 criteria for all six tests under those conditions.

SEPARATE WATER-CONTACT SCREENING

SIRIM Berhad IBRC report J0399/22 (1 June 2022) records no cytotoxicity response for its tested sample under LWI-238-01 and states compliance with MS 1583 Part 1:2003, Clause 7. This was an initial screening of a separate sample; the report is not a product approval or evidence of potable-water certification for ID/UW.