

TDS 03 • PETROLATUM CORROSION PROTECTION SYSTEM

Petrolatum Anti-Corrosion Tape – Seawater Grade

Seawater petrolatum tape • marine-grade petrolatum tape



SYSTEM ROLE • PRIMARY WRAP

Primary corrosion protection for wet, tidal and submerged steel as part of the petrolatum corrosion protection system.

Product description

A specially formulated three-layer thickened petrolatum tape. Inert oily petrolatum, fillers, corrosion inhibitors, preservatives and antimicrobial agents are impregnated and coated on both faces of a non-woven synthetic fabric, forming a continuous multi-layer hydrophobic seal that excludes seawater and air and passivates surface oxides. It can be applied directly under water.

Typical system configuration



Zhuohuang systems are modular. The configuration above is typical for this product; components are added or omitted according to substrate condition, geometry, operating environment and project specification.

CHOOSING THE PROTECTIVE OUTER WRAP

Three outer wrap materials are available and the choice follows the exposure, not the primary tape: **aluminium foil** for above-ground and sunlit assets, **PE tape** for buried service with normal backfill, and **PP fibre-reinforced tape** where soil stress, rocky backfill or handling damage govern. Where there is no ultraviolet or mechanical exposure, an outer wrap may not be required at all.

KEY CHARACTERISTICS

- Can be applied to wet or submerged surfaces
- 4 000 h neutral salt spray without rust
- Acid, alkali and salt-water resistance at rust grade A
- Very low water vapour transmission — 0.165 g/(m²·24 h)

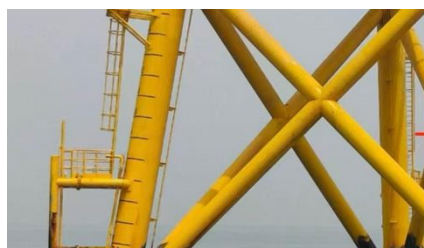
TYPICAL APPLICATIONS

- Jetty and quay steel pipe piles
- Splash-zone and tidal-zone steel
- Submerged marine structures and pipework
- Offshore and harbour steelwork under continuous wetting

WHY IT MATTERS

Feature	What it means on site
Applied to wet or submerged steel	The working window is the tide, not the weather forecast — no drying period and no dehumidification equipment.
Non-curing hydrophobic seal	Displaces seawater at the steel surface and stays flexible under wave loading and structural movement.
4 000 h salt spray without rust	Independent evidence for the environment the product is actually sold into.

TYPICAL APPLICATIONS — FIELD PHOTOGRAPHS



Jetty and quay steel



Steel pipe piles in water



Port and terminal steelwork

Technical properties

Property	Typical / standard value	Test method
Product form	Non-woven fabric, both faces impregnated	—
Thickness	1.3 mm	GB/T 3820
Surface density	1.6 kg/m ²	HB 7736.2
Peel strength	100 N/m	GB/T 32119 Annex H
Breaking strength	240 N/50 mm	GB/T 3923.1
Elongation at break	20 %	GB/T 3923.1
Insulation resistance	5.0 × 10 ² MΩ·m ²	GB/T 32119 Annex I
High-temperature resistance, non-dripping	70 °C	GB/T 30651
Low-temperature handling	−20 °C to 0 °C — no fracture or crazing	GB/T 30650
Water vapour transmission	0.165 g/(m ² ·24 h)	GB/T 1037
Acid resistance (10 % HCl, ambient, 7 d)	Rust grade A	SY/T 0315
Alkali resistance (10 % NaOH, ambient, 7 d)	Rust grade A	SY/T 0315
Corrosivity to steel (weight-loss method)	−0.2 to +0.2 mg/cm ²	GB/T 32119 Annex K
Neutral salt spray, 4 000 h	No rust	GB/T 10125
Operating temperature	−20 °C to +65 °C	—
Installation temperature	−5 °C to +45 °C	—
Minimum overlap	55 %	—

Values are typical or standard configurations for the grade described and are not universal acceptance limits. Where a property is not listed, it is not declared for this grade in the source technical documentation. Confirm the applicable grade and project acceptance criteria before order.

Sizes and packaging

Size	Reference	Packing
200 mm × 10 m	—	8 rolls / carton
300 mm × 10 m	—	6 rolls / carton

Standard supply width range 200 mm to 300 mm; other sizes to order.

Third-party verification

INDEPENDENT LABORATORY TEST	
Report number	CTICAQ4512401550823164BR
Laboratory	CTIC Testing Technology (Guangdong) Group Co., Ltd.
Accreditation	CMA 202319017008 · CNAS L19533 · ILAC-MRA
Sample tested	Petrolatum (Ester) Oil-Based Anti-Corrosion Tape
Test basis	CDP-S-0GP-AC-019-2014-2 and client-specified indices
Date of issue	18 July 2024
Conclusion	All tested items comply with the requirements.
This report was issued on a sample submitted as “Petrolatum (Ester) Oil-Based Anti-Corrosion Tape”. The report does not state a product model, so the result is given here as a related reference for this product family rather than as a test of this specific product.	

The full report is available on request. A faithful English transcription is issued as a separate single-product file and in the compilation Zhuohuang Test Reports – English Compilation. A test report records the properties measured on the sample submitted; it is a test result, not a system certification.

Application

Step	Procedure
01	Remove marine growth, loose rust, scale and flaking coating. Prepare to the project-specified level. The tape may be applied to wet or submerged steel.
02	Apply petrolatum paste or mastic to pitted, recessed and irregular areas to build a smooth profile.
03	Wrap the tape spirally with a minimum 55 % overlap on each turn, working from the lower level upwards where practical.
04	Press and smooth each turn by gloved hand so that the layers consolidate into a continuous seal.
05	Install the mechanical outer protection (protective armour or jacket) over the completed wrap in the tidal and splash zone.

STORAGE

Store sealed in the original packaging in a cool, dry, ventilated place, away from direct sunlight, open flame, strong heat, strong oxidising agents and sources of ignition. Keep clear of contamination. Unopened material can be stored long-term at ambient temperature.

HEALTH AND SAFETY

The products in this range are not classified as dangerous goods for supply. Wear grease-resistant gloves and avoid contact with the eyes. Wash hands with soap and water after handling. Combustion releases carbon monoxide and hydrocarbon by-products. Consult the product safety data sheet before use; it is supplied on request.

WASTE

Avoid or minimise waste wherever possible. Do not discard waste material, including packaging, in the surrounding environment. Follow all applicable disposal legislation.

DISCLAIMER

The information in this document is based on Zhuohuang product records, manufacturer data and third-party test reports available at the date of issue. Values are typical or standard configurations and are not universal acceptance limits. Product performance depends on substrate condition, surface preparation, geometry, operating temperature and exposure. Confirm the applicable grade, current packaging, project acceptance criteria and the relevant safety data sheet before order and application.

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