TRENTON WAX-TAPE® SYSTEMS

An effective, long-lasting anticorrosion system for the toughest environments.

Designed to fit various shapes and structures, protecting assets where no other conventional materials can match.

Strong UV resistance properties making it suitable for outdoor use, lasting for over 20 years.

Suitable for all industries. (Refineries, Petrochemical, Storage Facilities, Utilities, Mining, Ports & Terminals, Pharmaceuticals, etc.)

Reducing the TOTAL COST

Effective control of Total Cost

*With **Trenton Wax-Tape**,*

1. Simple surface preparation with no blasting required, reducing pollution, cutting labor and equipment expenses.
2. Simple and forgiving application procedure with high tolerance to weather conditions, quality assurance and inspection is made easy.
3. Great for Recoating work. Application is done when needed, as desired, no more delay due to contractors, labors and equipment management.
4. Long lasting protection of over 20 years, eliminating repeated application and costly yearly maintenance, reducing downtime and underproduction costs.

Ease of Maintenance

TRENTON Wax-Tape can be easily removed for maintenance work

A large diameter valves and flanges was wrapped with Wax-Tape in 1986.

In 1998, the Wax-Tape was removed for maintenance work on the valves. Here are some of the comments made by the inspection personnel:

"Because there was no corrosion, the valve/flange assembly was as easy to take apart as it was to put together"

"Even the threads on the bolts looked good."

Severe Corrosion	DAY 0 Wax-Tape Protection	DAY 610 No Corrosion Evident	DAY 930 No Corrosion Evident
			
			
			

Above The Ground

For pipelines, bridge spans, flanges, structural steelwork and irregular objects.

Excellent for use in areas where blasting or painting may be impractical.

Pipeline soil transitions

Hard to reach places

Irregular Objects

Sweating Lines

Highly corrosive environments

Steelworks

Coloring for ease of management

Below The Ground

Outstanding waterproofing characteristics. Compatible with cathodic protection systems. Can be backfilled immediately.

Recoating

Wax-Tape with MC Outerwrap

Below ground pipeline can be backfilled immediately

Protection of large valve

Transition zone of large pipeline

Wax-Tape with Guard Wrap

Used in the water industry

High Temperature Application HT-3000

High Temperature Wax-Tape HT-3000 with MC Outerwrap

Quick and easy to apply Wax-Tape application that requires minimal surface preparation (SSPC SP2).

Applicable to aboveground and belowground piping at continuous operating temperatures of up to 110°C

Minimal surface preparation (SSPC SP2)

Works aboveground and belowground, and compatible with cathodic protection systems.

Protection of high temperature tank chime

Case History: Valve Box at Terminal

Location:
The valve boxes carrying toluene, vinyl chloride, diesel and various fluids are situated at the unloading dock sitting right below the ground level with covers.

Problem:
With valve box situated in close proximity to the ocean, it collects vast amounts of sea water from splashes and rain water, and quite often these runoffs fills up the entire box.

These valves and flanges are coated with paint and wrapped with petrolatum tape. However, corrosion continues to attack these structures. Vast amount of rust flakes are visible at the floor of the box.

The petrolatum tape had to be held in place with PVC tapes because it lost adhesion and starts to peel and fall off.

Action Taken:
After comparing Wax-Tape alongside paint coatings and petrolatum wrap, the client concluded that Wax-Tape was the right system to use to resolve their corrosion problems. The client replace all coatings and wraps inside the valve box with Wax-Tape Anticorrosion System.

LEFT: Wax-Tape RIGHT: Petrolatum

Around The Storage Tank

Storage tank chime presents challenges as crevice corrosion is likely to occur..

Settlement of the tanks and prolong UV exposure can cause coatings to crack and delaminate.

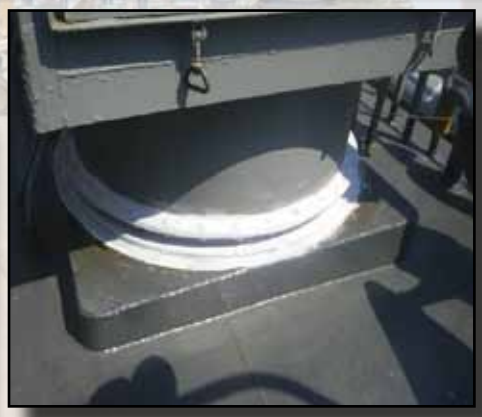
Quick, Effective and Economical Solution

1. Prepare the surface,
2. Build a sloping profile where tank wall meets the base,
3. Apply Wax-Tape starting from the base up the vertical tank wall.

** Wax-Tape protection forms a continuous, effective, and flexible coating that will not harden, crack, or peel off.*

On The Vessel

Wax-Tape protects your assets on the water



In The Ocean

Wax-Tape protects your assets under water

Wax-Tape ADVANTAGE

TRENTON Wax-Tapes are composed of microcrystalline waxes, plasticizers and corrosion inhibitors (with no fillers) saturated into a non-woven, non-stitch bonded synthetic fabric, forming a tape wrapper. This means they stay conformed to irregular fittings and provide excellent protection.

Wax-Tape Primers are a key reason why the Trenton Wax-Tape system is so effective in mitigating corrosion. It is a blend of microcrystalline waxes, plasticizers and corrosion inhibitors (with no fillers).

The primers penetrate surface rust in preparation for the application of Wax-Tapes, the field applicators only need to use a wire brush to prepare the surface. The primers thoroughly wet the surface of the pipe and require no specific surface profile or anchor pattern for proper adhesion.

Unique Characteristic

1. Easily applied and highly conformable, can be used on pipelines, storage tanks, joints, bolts, flange, valves, welds, bends, supports, etc.
2. No blasting required, surface preparation of NACE/SSPC-SP2, ISO ST2 or WJ2.
3. Resistance to UV exposure, chemicals, salts and weathering.
4. Applicable to wet surface and suitable for extreme weather and working conditions.
6. Coating maintains flexibility, will not dry or harden causing cracks and delamination.
7. Non-toxic, non-carcinogenic, and low VOCs.
8. Can be painted with water based paints after coating firms up.
9. Can be cut as desire with zero scrap, can be stored indoors indefinitely in original packaging.

Test Results

Chemical Resistance
ASTM G20
Vapor Phase

Salt Spray and Ultraviolet Exposure Test

Test	Result
Salt Spray (ASTM B117 - 1000 hours)	No visible effect
Ultraviolet Exposure (ASTM G53 - 1000 hours)	No material degradation

Simple Application

1. Surface Preparation

Wire brush and scrape surface clean of loose rust, paint, dirt. (SSPC-SP2, ISO ST2, WJ2)


2. Apply Primer

Apply thin layer onto surface. No curing or drying time before wax-tape application.


3. Apply Wax-Tape

Apply wax-tape in spiral fashion. Ensure adequate overlap and remove air pockets.



4. Inspection

Check:
- Removal of all air pockets
- Adequate overlap
- Edges are firmly pressed down (*Sealing the edges*)


Effect \ Reagent	Hydrochloric Acid, 5%	Nitric Acid, 10%	Sodium Chloride, 10%	Sodium Hydroxide, 10%	Lime Water Saturated
Blistering	NO	NO	NO	NO	NO
Chalking	NO	NO	NO	NO	NO
Discoloration	NO	NO	NO	NO	NO
Swelling	NO	NO	NO	NO	NO
Loss of Adhesion	NO	NO	NO	NO	NO
Delamination	NO	NO	NO	NO	NO

A World of Applications

Storage tank chime

Pipelines

Insulated pipeline across bridge

Platform Risers

Bridges

Riveted joints

Recoating

Wax-Tape cut for inspection and repair

Expansion Joint

Motor casing

Structural support

Sweating Lines

On the vessel

Marine park

Environmental Friendly Solution

Specifications

Wax-Tape	
Color	Aluminium, White, Red, Yellow, Blue, Green, Brown
Thickness	70 - 90 mil (2.0 mm)
Weight	4 lb/ yd^2 (2.17 kg/m^2)
Dielectric Strength*	> 16 kv
Operating Temp.	-50°F ~ 140°F (-46°C ~ 60°C)

* With overlap

Wax-Tape Primer	
Color	White, Brown
Coverage	5m^2 ~ 10m^2 / liter
Density	4 lb/ yd^2 (2.17 kg/m^2)

Packaging		
Width	Length	Packaging
2” (5 cm)	9’ (2.74 m)	48 rolls / case
4” (10 cm)	9’ (2.74 m)	24 rolls / case
6” (15 cm)	9’ (2.74 m)	16 rolls / case
12” (30 cm)	18’ (5.48 m)	4 rolls / case
Wax-Tape Primer (1 gallon / drum)		4 drums / case

Wax-Tape requires no blasting and is non-toxic, non-carcinogenic with very low VOCs. Wax-Tape is widely used in the water industry on pipelines to safely transport water near the river, reservoir, above or below the ground.

Usage Estimates

Pipe Size		Recommended Wax-Tape dimension		Recommended overlap, cm	Length of Wax-Tape required per meter of pipe, m	Primer usage per meter of pipe, liter	
Size, in	OD, mm	cm	inches			Rough surface (based on 5m²/L)	Smooth surface (based on 10m²/L)
1/2	21.7	5	2	2.5	2.73	0.014	0.007
3/4	27.2	5	2	2.5	3.42	0.017	0.009
1	34.0	5	2	2.5	4.28	0.021	0.011
1 1/4	42.7	10	4	2.5	1.79	0.027	0.013
1 1/2	48.6	10	4	2.5	2.04	0.031	0.015
2	60.5	10	4	2.5	2.54	0.038	0.019
2 1/2	76.3	10	4	2.5	3.20	0.048	0.024
3	89.1	10	4	2.5	3.74	0.056	0.028
3 1/2	101.6	15	6	2.5	2.56	0.064	0.032
4	114.3	15	6	2.5	2.88	0.072	0.036
5	139.8	15	6	2.5	3.52	0.088	0.044
6	165.2	15	6	2.5	4.16	0.104	0.052
7	190.7	15	6	2.5	4.80	0.120	0.060
8	216.3	15	6	2.5	5.44	0.136	0.068
9	241.8	15	6	2.5	6.08	0.152	0.076
10	267.4	15	6	2.5	6.73	0.168	0.084
12	318.5	30	12	5.0	4.01	0.200	0.100
14	355.6	30	12	5.0	4.47	0.223	0.112
16	406.4	30	12	5.0	5.11	0.255	0.128
18	457.2	30	12	5.0	5.75	0.287	0.144
20	508.0	30	12	5.0	6.39	0.319	0.160
22	558.8	30	12	5.0	7.03	0.351	0.176
24	609.6	30	12	5.0	7.67	0.383	0.192
28	711.2	30	12	5.0	8.94	0.447	0.223
30	762.0	30	12	5.0	9.58	0.479	0.239
32	812.6	30	12	5.0	10.22	0.511	0.255
36	914.4	30	12	5.0	11.50	0.575	0.287
40	1016.0	30	12	5.0	12.77	0.638	0.319
44	1117.6	30	12	5.0	14.05	0.702	0.351
48	1164.3	30	12	5.0	14.64	0.732	0.366
52	1320.8	30	12	5.0	16.60	0.830	0.415

1. This table is guide only, the actual usage may vary.
2. Please apply approximately 5% material buffer in estimates.
3. Example: 4” pipeline that is 80m long.

Use 6” wax-tape as recommended with 2.5cm overlap

Wax-Tape Calculation:

2.88 x 80m x (1+5%) = 241.92 meters of 6” Wax-Tape required

241.92 m / 2.74 = 88.29 rolls of 6” Wax-Tape required

Primer Calculation:

0.072 x 80 m x (1+5%) = 6.048 liters ≈ 2 gallons

An Effective and Long-lasting Anticorrosion System

Wax-Tape provides long lasting protection from UV damage, weathering and road salt runoff. The inset photo shows Wax-Tape being applied in 1981. Wax-Tape has several such long-term applications, with no end-of service in sight.

Wax-Tape are very cost-effective, especially when the Total Cost and the designed life of the project is taken into consideration.

In hard to reach locations (near water) where blasting is impractical, causing environmental issues, Wax-Tape is frequently used as it is long lasting with no blasting needs.

Exclusive Distributor

TRENTON ANTICORROSION MATERIALS

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