

ScarGuard® E

(Formerly as Thermo-Wrap 24HDD)

Composite Mechanical & Abrasion Protection for Directionally Drilled Pipelines

ScarGuard® E is designed to protect mainline and field joint coatings from the mechanical stresses and scarring associated with horizontal directional drilling (HDD), thrust-boring and micro-tunneling of pipelines. **ScarGuard® E** is a composite abrasion resistant overcoat comprised of fiberglass cloth impregnated with high performance grade of resin. This sacrificial outer laminate system protects pre- approved anticorrosion field joint coatings and mainline coatings such as FBE, liquid epoxies, shrink sleeves, and 3LPE/3LPP.

The ScarGuard® line of products minimizes the need for costly repairs after pull back, and provides robust protection of the underlying pipeline coating.

Bury, Bore or Drill with Confidence

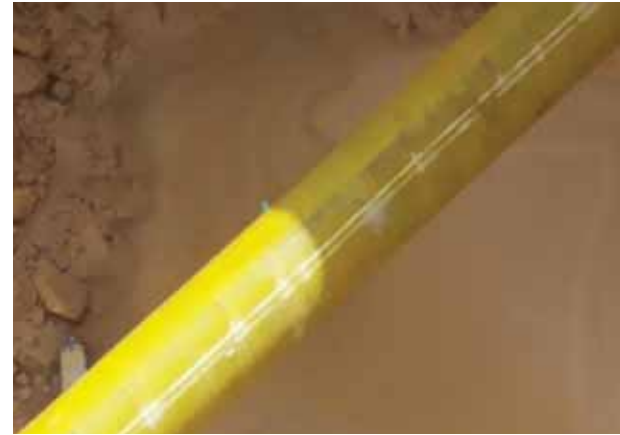
- Provides unparalleled protection against impact, abrasion, gouge, punctures and tears that may result from directional drilling, rough handling, native backfills or severe in-service conditions

Cure Options for any Application

- System full cure time is 12hrs at 40°C. Accelerated curing is possible up to 3 hrs using controlled external heating source set to 93°C

Fast & Controlled Impregnation

- ScarGuard® E wrap is impregnated using the resinator machine which assure a uniform distribution of the resin along the fiber vs conventional impregnation method resulting in materials wastage and random saturation.



Applications



Onshore Pipelines



Offshore Pipelines



Abrasion Resistant Overcoat (ARO)



HDD, Thrust-Boring, Micro-tunneling



Girth-Weld Joints



Mainline Coating Protection

ScarGuard® E

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Properties	Test Method	ScarGuard® E
Total Thickness	SSPC-PA-2	54.4 mils
Thickness per Layer	SSPC-PA-2	27.2 mils
Solid Content	-	100%
Tensile Strength	ASTM D3039	80.03 ksi (552 MPa)
Tensile Modulus	ASTM D3039	4.26 msi
Elongation	ASTM D3039	2.10%
Dolly Pull Off Adhesion	ASTM D4541	1,547 psi (10 MPa)
Hardness, Shore D @ 75°F (23°C)	ASTM D2240	90
In-Plane Shear Strength	ASTM D5379	13,055 psi (90 MPa)
Chord Shear Modulus	ASTM D5379	629 ksi (4336 MPa)
Lap Shear (to steel)	ASTM D5868	3,700 psi (25 MPa)
CTE	ASTM E831	6.79 $\mu\text{m}/\text{m}^{\circ}\text{C}$
Cure Schedule*		
Working time	At 23°C	45 min
Full Cure Time	At 40°C	12 hrs

*All tested at 23°C.

Other Benefits

- Simple, cost-effective installation
- Drastically reduced installation time and materials
- Consistency of application, joint after joint
- Non-hazardous, No VOC
- Easy to apply
- Smooth profile reduces damage during pull through

Since 1967, Canusa-CPS has been a leading developer and manufacturer of specialty pipeline coatings for the sealing and corrosion protection of pipeline joints and other substrates. Canusa-CPS high performance products are manufactured to the highest quality standards and are available in a number of configurations to accommodate many specific project applications.

The product information shown here is intended as a guide for standard products.

Consult your Canusa representative for specific projects or unique applications at info@canusacps.com.



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Quality Management system registered to ISO 9001

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the product data sheet when used in compliance with Canusa's written instructions. Since many installation factors are beyond our control, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection therewith. Canusa's liability is stated in the standard terms and conditions of sale. Canusa makes no other warranty either expressed or implied. All information contained in this data sheet is to be used as a guide and is subject to change without notice. This data sheet supersedes all previous data sheets on this product. E&OE

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