

CANUSA-CPS

Canusa-CPS
A division of Shawcor Ltd.

Head Office
25 Bethridge Road
Toronto, Ontario, M9W 1M7, Canada
Tel: +1 416 743 7111
Fax: +1 416 743 5927

Canada
Dome Tower St. 2200
333-7th Avenue SW
Calgary, Alberta, T2P 2Z1, Canada
Tel: +1 403 218 8207
Fax: +1 403 264 3649

Americas
5875 N. Sam Houston Pkwy W.
Suite 200
Houston, TX 77086
Tel: +1 281 886 2350
Fax: +1 281 886 2353

Middle East
Plot # 37-WR43, Sector no.: ICAD III
Musaffah South, PO Box 2621
Abu Dhabi, The United Arab Emirates
Tel: +971 2 204 9800

Europe, Africa & Russia
Dellaertweg 9-E, Gebouw "Le Carrefour"
2316 WZ Leiden, The Netherlands (NL)
Tel: +31 71 80 802 70
Fax: +31 71 80 802 71

Asia-Pacific
101 Thomson Road, #17-01
United Square, Singapore 307591
Tel: +65 6477 5300
Fax: +65 6732 9073

Quality Management system
registered to ISO 9001

shawcor.com/contact

info@canusacps.com

canusacps.com

Shawcor, the world's leading integrated energy services company, designs and manufactures innovative solutions to protect the integrity of oil and gas, petrochemical, industrial, electrical, and automotive assets around the world. With a focus on five overarching disciplines—Pipeline Performance, Integrity Management, Composite Production Systems, Connectivity and Oilfield Asset Management—Shawcor operates 105 manufacturing and service facilities in 20 countries across the globe.

CANUSA-CPS



SCAR-GUARD®

Composite Mechanical Protection for Directionally Drilled Pipelines

THE PATENTED CANUSA-CPS SCAR-GUARD® LINE OF PRODUCTS IS DESIGNED TO PROTECT FIELD JOINT AND MAINLINE COATINGS FROM THE MECHANICAL STRESSES AND SCARRING ASSOCIATED WITH HORIZONTAL DIRECTIONAL DRILLING (HDD), BORING AND MICRO-TUNNELING OF PIPELINES.

Canusa-CPS Scar-Guard® is a composite abrasion resistant overcoat comprised of fiberglass cloth and pre-impregnated flexible resin that is activated by water and cured within minutes. This sacrificial outer laminate system protects pre-approved anticorrosion field joint coatings and mainline coatings such as FBE, liquid epoxies, shrink sleeves, and tapes. The Canusa-CPS Scar-Guard® line of products minimizes the need for costly repairs after pull back, and provides long-term protection of the underlying pipeline coating. U.S. Patent #8522827

APPLICATIONS

- Onshore and offshore pipelines
- Abrasion resistant overcoat (ARO)
- HDD, drilling and boring
- Girth-weld and mainline coating protection

BENEFITS

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 environment

Fast cure, slow cure, UV-Curable, UV-Resistant – all available options to suit a wide range of project cycle time requirements and construction conditions.

Non-shielding

Suggested voltages for high-spark voltage testing as per NACE SP0188 pass through Canusa-CPS Scar-Guard® to ensure the anticorrosion coating can be tested for integrity after pull-through and protected for the lifetime of the asset.

Fast, easy installation

Scar-Guard products are simply wrapped onto the existing coatings surface and activated by water. Pre-impregnated moisture cured polyurethane resin means – no field mixing or saturation required!

MAXIMUM ABRASION RESISTANCE

CAPABILITY/PROPERTIES	Scar-Guard	Scar-Guard XL	Scar-Guard E
Laminate Properties			
Thickness (per layer)	0.034"	0.013"	0.034"
Resin Type	Moisture Cured PU	Moisture Cured PU	Epoxy
Application Temperature	32° to 150°F (0° to 65°C)	32° to 150°F (0° to 65°C)	50° to 250°F (10° to 121°C)
Cure Schedule 75°F (24°C)			
Working Time	8 min	40 min	65 min
Set Time	28 min	75 min	2.5 hr
Impact Resistance			
ASTM-G14 (100 mils)	476 J (421 in-lb)	48.7 J (431 in-lb)	21.7 J (192 in-lb)
Abrasion Resistance			
ASTM D-4060 (cycles/mil)	1,667	1,467	3,333
Gouge Resistance			
Partech (50 kg load)	Pass	Pass	Pass



Failed



Scar-Guard® Passed

PROJECT OVERVIEW

After installing 1,800' of 30" pipe, the HDD terrain was so rough that it had demolished the coatings used to protect the welds. Therefore the large utility company had to pull-back the pipe and evaluate other field-applied coatings and mechanical protection. Under evaluation was:

- Cold applied tape with 2 layers of Syntho-Glass (SG)
- Two-part epoxy ARO at 40 mils thick, specifically designed for HDDs

- The same two-part epoxy at 20 mils thick, wrapped with 8 layers of Scar-Guard XL

After installing all 3 systems, the crew welded an additional stick of pipe behind the bore head to allow for visual inspection of the trial. When the systems had set, it was time for the crew to begin the pull-back, through the compacted, rocky soil.

- The visual inspection revealed that the rough terrain completely removed the cold applied tape.
- Although the two-part epoxy was specifically designed for the abrasion and impact associated with directional drilling, the height of the weld took the brunt of the force chipping the epoxy down to bare steel and created holidays.
- The final system that included 8 layers of Scar-Guard XL, protected the corrosion coating flawlessly! The company determined that Scar-Guard's composite-reinforced resin technology was the answer.

