



Pipelines

Building protection one layer at a time

Protective & Marine Coatings
Europe, Middle East, Africa & India

pipeclad®

Sherwin-Williams: Support beyond the sale

Sherwin-Williams has been providing protection to the exterior and interior of pipes for the Oil & Gas industry for over 50 years—in fact, we have coated enough pipe to circle the earth six times. As the industry moves into an era of complex exploration and transmission, the requirements for coatings become more demanding. To meet the increasing difficulty of drilling and distribution, we have developed coatings to meet even the most challenging pipeline project requirements.

We build pipeline protection one layer at a time.

With multiple innovative technologies, products that meet or exceed the most challenging industry standards, consistent deliveries wherever the project is located on the globe, and onsite application engineering expertise, Sherwin-Williams has your needs covered.

This Product Selection Guide is designed to help you choose the optimal coating for your project.

Exterior Coatings



Corrosion Mitigation with Single Layer FBE

FBE (Up to 110°C)

- Pipeclad 2000

High Operating Temp (HOT) FBE

- Pipeclad HOT 120
- Pipeclad HOT 120 Flex
- Pipeclad HOT 150
- Pipeclad HOT 150 Flex
- Pipeclad HOT 180

Low Application Temp (LAT) FBE

- Pipeclad 2000 LAT

Primer for 3-Layer Systems

- Pipeclad 1000



Protect with Dual-Layer

Abrasion Resistant Overcoats

- Pipeclad 2040
- Pipeclad 2040 Flex
- Pipeclad 2040 Flex LAT

Moisture Barrier ARO

- Pipeclad 2060

Textured Fusion Bonded Epoxy

- Pipeclad Roughcoat



Preserve with Specialty Coatings

UV Resistant Options

- Fusion Bonded Polyester
- Pipeclad FBP
- Acrylic Latex Overcoat
- Pipeclad UV Protect

Mill Varnish

- Pipeclad WLA2217

Interior Coatings



Flow Better

Flow Efficiency

- Flowliner 930R CS
- Flowliner 930R HS
- Flowliner 930R UHS

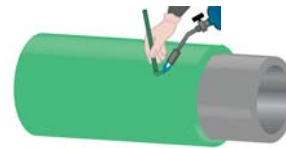


Drill Faster

FBE Powder

- PFG70002
- PFL70002
- 702G
- 702N
- HXR0016 (phenolic primer)

Repair Coatings



Repair Mistakes

Pipeclad 970G (2-part Epoxy) (cartridges, pints, quarts)

- Green
- Tan/Brown
- Black

Pipeclad 970P Patch Stick

Pipeclad® external powder coatings

Pipeclad is the preferred coatings solution of major petroleum producers and pipeline operators around the world. With a wide range of Fusion Bonded Epoxy products to address the specific needs for your pipeline, we provide optimum protection against corrosion, allowing you to be confident in the long-term integrity of your pipeline.

From rugged, rocky terrain to deep ocean floors, the family of Pipeclad coatings provide excellent adhesion, maximum flexibility and strong abrasion resistance—all of which minimize the cost of cathodic protection. Whether your project includes high operating temperatures, low application temperatures or standard FBE; or if you require protection against abrasion, moisture uptake, or UV rays: Sherwin-Williams has a product to meet your performance requirements.

For five decades, we have been the coating of choice in the oil and gas industry. No matter what your project requires, Sherwin-Williams has the anti-corrosion coating required to ensure maximum protection.

Coating	Description	Corrosion Resistance	UV Resistance	Multi-Layer Overcoat	Corrosion MLPO
Pipeclad 2000	FBE for single-, dual- & three-layer applications	○			○
Pipeclad 2040 ARO	Abrasion Resistant Overcoat (ARO)			○	
Pipeclad 2040 Flex	Flexibilized ARO			○	
Pipeclad 2040 Flex LAT	Low Application Temp ARO			○	
Pipeclad 2060	Moisture Barrier ARO			○	
Pipeclad Roughcoat	Roughcoat FBE for concrete coating			○	
Pipeclad HOT 120	High Operating Temp FBE - 120°C	○			○
Pipeclad HOT 120 Flex	Flexibilized High Operating Temp FBE - 120°C	○			○
Pipeclad HOT 150	High Operating Temp FBE - 150°C	○			○
Pipeclad HOT 150 Flex	Flexibilized High Operating Temp FBE - 150°C	○			○
Pipeclad HOT 180	High Operating Temp FBE - 180°C	○			○
Pipeclad LAT	Low Application Temp FBE	○			○
Pipeclad 1000	Primer for MLPO	○			○
Pipeclad UV Protect	UV Protecting Latex Overcoat		○	○	
Pipeclad PTA50057	UV Protecting Fusion Bonded Polyester		○	○	



Pipeclad® internal liquid coatings

Pipeline Flowliner epoxy coatings are designed to reduce owner operational costs by providing maximum flow efficiency in oil and gas pipelines while also reducing maintenance, commissioning and installation times. They reduce corrosion of pipes during storage and make for cleaner effluent products when testing a pipeline with water. Pipeclad Flowliner coatings are formulated to meet performance requirements of the API RP 5L2, ISO 15741 and DIN EN 10301 international standards. These coatings are designed with superior application properties thereby enabling a variety of DFT levels to accommodate coatings specifications.

Coating	Volume Solids	Mix Ratio	Rz at 100 Microns
Flowliner 930R CS	52 ± 1	1 : 1	< 3 microns
Flowliner 930R HS	66 ± 1	4 : 1	< 2 microns
Flowliner 930R UHS	88 ± 1	1 : 1	< 2 microns

Pipeclad® internal powder coatings

Our internal powder coatings have an extensive track record of protecting OCTG assets and drill pipe in a variety of aggressive environments around the world. The coatings provide improved hydraulic efficiency for faster drilling and better pumping and exceptional corrosion protection, thereby extending the life of the equipment and reducing the total operating cost. Whether applying direct to metal or over our liquid phenolic primer, this family of FBE powder coatings will protect your assets and bring value to your customer.

Coating	Recommended Uses	Color	Max Use Temp (°C)	Chemical Resistance	Abrasion Resistance	Impact / Flex
PFG70002	High temperature drill pipe. Oil, gas and water wells. Rod pump wells. Gas lift.	Dark Green	204°C	Excellent	Excellent	Fair
PFL70002	High temperature drill pipe. Oil, gas and water wells. Rod pump wells. Gas lift.	Blue	204°C	Excellent	Excellent	Fair
702G	Drill pipe. Oil, gas and water wells. Rod pump wells. Gas lift.	Green	150°C	Very Good	Excellent	Good
702N	CO2 injection WAG. Oil, water and gas production. Brine injection and disposal. Line pipe, flow lines.	Tan	120°C	Good	Excellent	Excellent



Approved by major global energy companies

Approved to global pipeline coating specifications:

- API RP 5L2
- AS/NZS 3862
- AWWA C213
- British Gas BGC/PS/CW6
- CSA Z245.20
- DIN 30670
- DIN EN 10301
- DVN RP-F106
- ISO 15741
- ISO 21809
- NACE RP-0394
- National Grid Specification T/SP/CW/6

Industry leaders that have approved the use of Pipeclad products:

- Air Products
- AKA Energy
- Alaska Gas Development Corporation
- Alliance Pipeline
- American Midstream
- Anadarko
- Andeavor (formerly Tesoro)
- Antero Resources
- Apache
- Atmos Energy
- Baltimore Gas & Electric
- Bechtel
- BHP Billiton (Petrohawk Energy)
- Blue-Knight Energy Partners
- Boardwalk
- BP (US, Alaska)
- Buckeye Partners
- Cabot Oil & Gas Corporation
- CenterPoint Energy
- Cheniere Energy
- Chesapeake Energy
- Chevron
- CHS Pipeline
- Colorado Springs Utilities
- ConocoPhillips
- Crestwood Midstream
- DCP Midstream
- Denbury Resources
- Devon Energy
- DistributionNow
- Dominion Transmission
- Dow Chemical
- Duke Energy (Piedmont Natural Gas)
- Eastern Shore Natural Gas
- Edgen Murray
- Enable Midstream
- Enbridge (US, Canada, Spectra Energy)
- Energy Transfer Partners (Regency, Sunoco Logistics)
- Enterprise Products Partners
- EOG Resources
- EP Energy
- EQT Midstream
- Excel Midstream
- Excelerate Energy
- ExxonMobil
- Explorer Pipeline
- Fermaca
- Florida Power & Light
- Fluor
- Formosa Plastics
- Gas Natural Fenosa
- Grupo Carso
- HESS
- Hilcorp (Harvest Pipeline)
- Houston Pipe Benders
- Howard Energy Partners
- JD Fields
- Kern River Gas Transmission
- Kiewit
- Kinder Morgan (Canada, CO2, Natural Gas, Products, El Paso, Copano Energy)
- Koch Pipeline
- Loop LLC
- Magellan Midstream Pipeline
- Mammoth Carbon Products
- Marathon Petroleum (MarkWest)
- MDU Resources Group (WBI Energy)
- Meritage Midstream
- Michcon (DTE)
- Mid-States Supply
- MRC
- National Fuel
- NextEra Energy (NET Midstream)
- NGL Energy
- NiSource
- Noble Energy
- NuStar Energy
- Occidental Petroleum
- OG&E
- ONEOK
- Pacific Northern Gas (PNG)
- Pembina
- Penn Virginia Corp.
- PG&E
- Phillips 66
- Pioneer Natural Gas
- Pipe Exchange
- Plains All American Pipeline
- Questar Gas
- Rangeland Energy
- Rice Energy
- Rimrock Midstream
- Saddle Butte Pipeline
- Saudi Aramco
- SemGroup
- Sempra Utilities (Southern California Gas)
- Sempra Mexico (IENOVA)
- Shell
- SilverBow Resources (formerly Swift Energy)
- South Jersey Gas
- Southcross Energy
- Southern Company Gas (AGL Resources)
- Southern Star
- Spire Energy (formerly LaClede)
- Suncor Energy
- Tall Oak Midstream
- Tallgrass Energy
- Targa Resources
- Tellurian LNG (Driftwood LNG)
- Texas Pipe
- TexStar Midstream
- TOTAL
- TransCanada (Columbia Pipeline Group)
- UGI Corporation
- Universal Pagasus
- Valero (Wilmington Refinery)
- We Energies
- WhiteWater Midstream
- Williams (Access Midstream)
- Xcel Energy

Pipeclad®: Approved and preferred around the world

Pipeclad corrosion protection products are the preferred coating of major petroleum producers and pipeline operators around the world. Pipeclad coatings have provided long-term protection for over 100,000 kilometers of pipelines, ranging in diameter from 2 to 56 inches.



Why Sherwin-Williams

Since 1866, Sherwin-Williams has been pushing the boundaries of science and innovation. Our unwavering commitment to application expertise is paired with coatings that are designed and tested to ensure best-in-class appearance, productivity, performance and sustainability.