

PRODUCT DATA SHEET

ANODEFLEX™ 1500

Product Information

Anodefex 1500 is a long-line flexible anode for impressed-current cathodic protection of buried pipelines, in-plant piping and of on-grade or buried storage tanks.

Consists of:

- Central Copper Conductor: Proprietary 19x7 stand #6 AWG (~13mm²) tinned-copper wire serving as a low resistance bus bar to deliver the required current over considerable distance without incurring substantial longitudinal voltage drop.
- Conductive Polymer: 0.5 in / 13 mm in diameter continuous extrusion, sealing the copper conductor from chemical attack yet allowing current to flow through from the conductor to the environment all along its length. The compound is a cross-linked linear low-density polyethylene that contains proprietary conductive carbon contents.
- Carbon Backfill: Pre-packaged, high performance calcined petroleum carbon backfill, serving as the active matrix in which the electrochemical reactions take place. Designed for minimum 20-year service life at maximum current output of 16 mA/ft. or 52 mA/m.
- Anode System: Carbon backfill combines with the conductive polymer coated cable to act as an anode.
- Fabric Jacket: Integrated woven, acid resistant and porous jacket holding the carbon backfill in place around the anode.
- Protective Braid: Tough, porous, non-conductive protective braid enhancing the abrasion and damage resistance of the fabric jacket.

The manufacturing process ensures a tightly packed fill material for optimum durability and performance. The synthetic jacket and protective braiding make the product ideal for installation through trenching or directional drilling.

Key Features & Benefits:

- Anode is in close proximity to the pipeline
- Distributes current uniformly over total length of pipeline
- No over or under protection
- Prevents accelerated coating disbondment
- More effective & economical than a series of discrete anodes
- Independent of variations in soil resistivity
- Pipeline Rehabilitation without excavation
- A fraction of the cost of recoating
- No loss of revenue or supply interruptions
- No safety problems associated with working on live lines
- Long continuous circuit lengths
- 90% fewer joints compared to conventional anode systems
- Avoids interference and stray current problems
- Enhances long-term performance
- Focuses current on the target structure
- Improves protection and cost efficiency
- Pre-packaging carbon backfill
- Loresco SC-3 product (or approved alternate)
- Ensures low resistance ground bed all the time
- Ensures the polymer coated cable is centered
- Simplifies field installation, fast & cost effective
- Installation with standard cable laying equipment

Product properties of Anodefex 1500

Diameter	1.5" / 38mm
Wire type	AWG #6 coated with conductive polymer
Product weight	1 lb/ft / 1.5kg/m
Fill material	Loresco™ SC-3 (or approved alternate)
Fill volume	0.77lb/foot / 1.15kg/m
Casing (sock)	Synthetic fabric
Braiding	Polypropylene filament
Current output	16 mA/ft / 52 mA/m
Installation temperature	Min. 0°F / -18°C, no maximum
Min. bend radius	20" / 500mm

Shipping weights & dimensions

Reel lengths	500', 1000', 1500', 2000' 100m, 200m 400m, 500m			
Pallet dimensions	44"x 48" x 52" - 64" high depending on reel length			
Pallet weights per reel length	500' reel	1000'	1500'	2000'
	700lbs	1260lbs	1830lbs	2330lbs
	100m reel	200m	400m	500m
	336kg	540kg	636kg	863kg
Handling	Handle with care. Keep reels on edge rails. Do not puncture the cable.			
Storage	Store in clean and dry environment or protect from moisture prior to installation. Unlimited shelf life.			

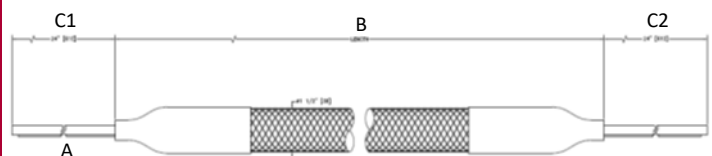
Ordering Information

Linear Anode Product	Description
AFLX 1500-01	Conductive polymer coated tinned-copper conductor packaged and centered in high conductivity carbon backfill.
Accessory Products	Application
AFLX UNI-TEE	Tee splice kit
AFLX UNI-SPLICE	In-line splice kit
AFLX UNI-CAP	End cap kit

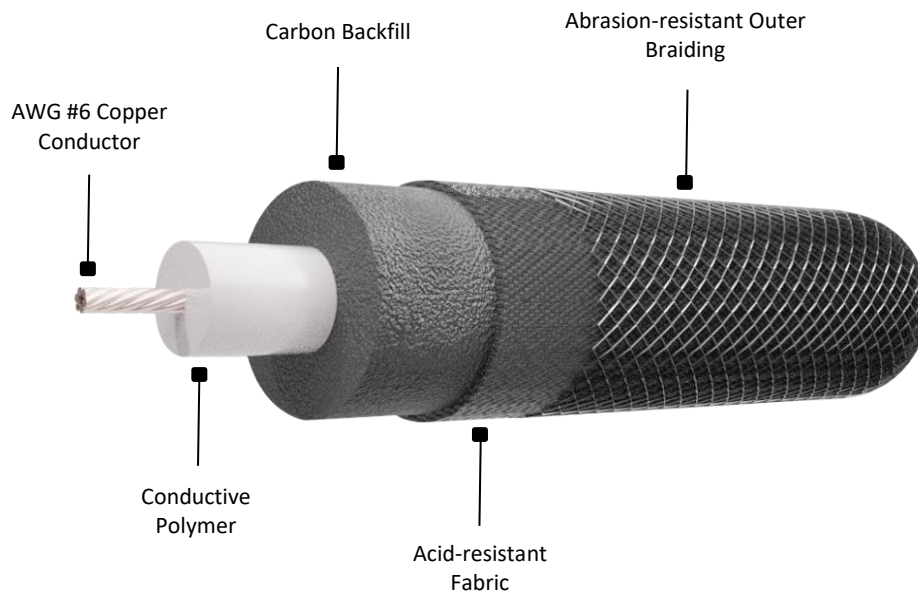
Other Information

Documentation	Extensive information is available on our website. Design considerations and other documentation may be obtained by contacting your local distributor or by sending email to info@sealforlife.com
Ordering Information	Specify wire gauge (A), cable length (B). Standard pigtail length (C) is 24" on each end.

Assembly Schematic



Typical Performance Properties		
Component / Property	Test Method	Typical Value
Copper Conductor		
Dimensions	ASTM B263	AWG #6
Resistance	ASTM B193	1.5 x 10 ³ Ohm-cm
Conductive Polymer		
Thickness	Measured	0.5" / 13mm
Volume resistivity	ASTM B193	1.5 Ohm-cm
Carbon Backfill		
Bulk density	ASTM D3172	74lbs/ft ³
Fixed carbon	ASTM D3172	99.35%
Ash	ASTM D3172	<0.5%
Fabric Jacket		
Weight	Measured	Min. 200 g/m ²
Bursting strength	ISO 3303	575N
Abrasion resistance	ASTM D4157	219 cycles
Fluid resistance	Internal 6 months immersion	Pass
Chlorine resistance	Internal 6 months immersion	Pass



Specification language

Anodefex 1500 is a long-line, flexible cable-like anode placed in continuous close proximity to the target structure. Uniform distribution of cathodic protection current achieved on applications where many conventional anode ground beds will not work or are difficult to install.

Product performance a result of the central, conductive-polymer coated copper conductor which allows current to flow long distances down the center conductor while allowing sufficient cathodic protection current to continuously pass through the conductive polymer along the length of the anode. System design should consider environmental factors such as adjacent structures, stray current, and fluctuations in soil resistivity.

In contrast to conventional ground bed systems, Anodefex 1500 placed in the ground in close proximity to the steel surface to be protected and provides uniform distribution of protective current to the entire steel surface. This maintains the steel-to-soil "instant-off" potential in the required window of -850mv and -1200mv. The improved current distribution increases anode efficiency and helps prevent over-voltage problems such as hydrogen generation and associated rapid coating disbondment. In addition, interference from other structures and stray currents are virtually eliminated.

Anodefex 1500 is delivered on long length spools and, because no additional carbon backfill is required, the installation is as simple as laying a low voltage power cable. Proven heat-shrinkable splice kits, Tee joints and end sealing caps are available to complete the installation.

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	Stopaq® - Covalence® - Polyken® - Powercrete® - Anodefex™				
	<small>DISCLAIMER: Seal For Life Industries warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Seal For Life Industries' written instructions. Because many installation factors are beyond the control of Seal For Life Industries, the user shall determine the suitability of the products for the intended uses and assume all risks and liabilities in connection herewith. Seal For Life's liability is stated in its General Terms and Conditions of Sale. Seal For Life Industries makes no other warranty either express or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.</small>				