



AA THREAD
SINCE 1979

SPECIFICATION SHEET

Main Office & Warehouse:

8320 193rd Ave Bristol, WI. 53104

Western Warehouse:

4000 East. US-6, Spanish Fork, UT 84660

Linear Low Density Enhanced Polyethylene – (9MIL) VB3® Enhanced Polywrap Pipe Sleeves

Application: Barrier encasement of pipe to prevent corrosion

Product Specifications

Raw Material: Virgin Low-Density Polyethylene with a Volatile Corrosion ⁵ Density Enhanced Polyethylene Film with VCI and Anti-Microbial Additives

Color: White, Purple, & Blue

Country of Origin: United States of America

Compliances: AIS, Buy American, BABA Act (Build America, Buy America Act), FTA 49 U.S.C. 2532(J) ;49 C.F.R. Part 661.

Markings: Material printed with AWWA Spec No., Pipe Diameter, Year of manufacturing, Manufacturing Mark, Warning of Corrosion Protection/Repair Damage.

Standard: Made in accordance with the latest ANSI/AWWA C105/A21.5 standards.

Overview: VB3® Enhanced Polywrap is a co-extruded 3-layer film fused into a single thickness at a minimum of 8mils. Our product is manufactured in the United States with virgin polyethylene per ASTM D4976. The inside layer (layer to come in contact with the pipe) is infused with a VCI and anti-microbial additives to aid in the control of microbiological induced corrosion and sulfate reducing bacteria. The manufacturing facility is SQF certified. The product is inspected and meets/exceeds the latest requirements of the AWWA C105 standards.

Physical Properties:

Test	AWWA C105 Min. Req.	AA Thread's Film*
Tensile	3600psi MD/TD	MD-4636psi
Strength	(ASTM D882)	TD-4466psi
Dielectric Strength	800 V/MIL (ASTM D149)	1946V/MIL
Impact Resistance	600 grams (ASTM D1709)	3200 grams
Propagation	2550 grams force MD/TD	MD-2666 grams force
Tear Resistance	(ASTM D1922)	TD-3184 grams force
Minimum Thickness	0.008" (8MIL)	0.009" (9 MIL)

Anti-Microbial and VCI Additive Tests:

Method	Results
ISO 22196:2011	99.9% Reduction of all bacteria tested against (tested against 2 different species)
ASTM G-21-130	Fungal growth after 28 days in incubation (tested against 5 different species)
ASTM E2180	99.9997% Reduction of NCIMB 8370
ASTM E2180	99.9994% Reduction of NCIMB 9467
BSI IEC 68-230:1980	3 Samples tested and all 3 showed 0 signs of corrosion (PASS)

*Tests are averages performed by independent lab results.

Full Specification for

VB3[®] Enhanced Polyethylene Encasement

For Ductile Iron Pipe

VB3[®] Enhanced Polyethylene Encasements are manufactured in the United States of American and compliant with AIS, Buy American, and BABA/BABAA requirements. It also meets or exceeds all requirements of the latest edition of ANSI/AWWA C105/A21.5, *Polyethylene Encasement Ductile-Iron Pipe Systems*. Additionally, it is enhanced with a volatile corrosion inhibitor (VCI) to protect from galvanic corrosion, as well as an anti-microbial biocide to limit microbiologically influenced corrosion (MIC).

This is a co-extruded 3-layer film with an overall thickness of a minimum of 8mils. The inside layer is a linear low-density polyethylene (LLDPE) which carries the VCI and the anti-microbial biocide. The middle layer is a slightly higher density film for more strength and to shield the additives from the excessive heat from the extrusion process. The outer layer is the final protective layer. The co-extruding process fuses these layers together to become one thickness no less than 8MILs.

As with any polyethylene encasement, proper installation is important as stated in ANSI/AWWA C105/A21.5 Sec. 4.4. After pulling the tube over the pipe, the wrap should be snug with minimal space between the wrap and the pipe, folded over and secured every 3 feet to avoid excess slack. Each joint must have a 12" overlap and secured around the pipe. If tapping always tape the tap area tightly prior to tapping and inspect wrap for any repairs needed afterwards. Backfill trench according to ANSI/AWWA C600 specifications.

Minimum Lay Flat Tube Widths for Ductile Iron Pipe by Pipe Diameter			
Nominal Pipe Size (inches)	Lay Flat Tube Width (Inches)	Nominal Pipe Size (inches)	Lay Flat Tube Width (Inches)
3-8"	20"	18-20"	41"
10-12"	27"	24"	54"
14"	30"	30"	67"
16"	34"	36-42"	81"
18"	37"	48"	95"
		54-60"	108"