



# SPECIFICATION SHEET

## Main Office & Warehouse:

1275 Kyle Ct. Wauconda, IL 60084

## Western Warehouse:

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

## Full Specification for: **VB3® Enhanced Polyethylene Encasement** For Ductile Iron Pipe

VB3® Enhanced Polyethylene Encasements 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.

This is a co-extruded 3-layer film with an overall thickness of a minimum of 8 mils. The inside layer is a thin layer of 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.

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 pipe. If tapping always tape the tap area tightly prior to taping and inspect wrap for any repairs needed afterwards. Backfill trench according to ANSI/AWWA C600 specifications.



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## Linear Low-Density Enhanced Polyethylene 8MIL VB3® Enhanced Polyethylene Encasements Specifications

**Application:** Barrier encasement of pipe to prevent corrosion.

### Product Specifications

**Raw Material:** Linear Low-Density Polyethylene with a Volatile Corrosion Inhibitor (VCI) and Anti-Microbial Additives.

**Finished Material:** Linear Low Density Enhanced Polyethylene Film with VCI and Anti-Microbial Additives.

**Color:** White Outside, White/Frost Blue Inside

**Standard:** ANSI/AWWA C105/A21.5

### **Physical Properties:**

Test	AWWA C105 Min. Req.	AA Thread's Film
Tensile Strength	3600psi MD/TD (ASTM D882)	MD-4636psi TD-4466psi
Dielectric Strength	800 V/MIL (ASTM D149)	1946V/MIL
Impact Resistance	600 grams (ASTM D1709)	3200 grams
Propagation Tear Resistance	2550 grams force MD/TD (ASTM D1922)	MD-2666 grams force TD- 3184grams force
Minimum Thickness	0.008" (8MIL)	0.0085" (8.5 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-21-13	0 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.

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

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