



Atlas Minerals & Chemicals, Inc.



DATA SHEET

PI-009 (8-00²)
Supersedes PI-009 (5-90)

ATLAS® EPOXY POLE REPAIR SYSTEM GROUNDLINE & BELOW GROUND POLE RESTORATION

DESCRIPTION

ATLAS EPOXY POLE REPAIR SYSTEM is a multi-component polymer resin-based repair and reconstruction system formulated for on-site quick and easy use. It fills cavities and restores rotted surface areas. ANCHOR-LOK™ high density polyethylene is used as a “wrap-around” form to contain the repair materials during application.

BASIC USES

A hollowed-out wooden pole, or a pole with below ground deterioration, can fail in high winds or due to ice storms. Traffic accidents snap poles. ATLAS EPOXY POLE REPAIR SYSTEM restores structural integrity of damaged wood poles.

Complete reconstruction with corrosion and weather resistant ATLAS EPOXY POLE REPAIR SYSTEM extends pole life, reduces outage times, and eliminates removal of apparatus from the damaged pole. The maximum service life of a pole is realized, often with no loss of service during the repair, when restoration is made using the ATLAS EPOXY POLE REPAIR SYSTEM. ATLAS EPOXY POLE REPAIR SYSTEM eliminates replacement of most damaged utility poles.

The use of patented ANCHOR-LOK PE Pole Wrap as a form to contain freshly placed EPOXY POLE FILLER insures a uniform space around the entire circumference of the pole for equal pole reinforcement by preventing thicker buildup of EPOXY POLE FILLER in one area, creating unequal strengths. ANCHOR-LOK is ultraviolet resistant. Because of its low friction finish, it is self-cleaning. It is left in place, providing an attractive, unobtrusive cover, upon completion of the restoration.

PACKAGING AND COVERAGE

ATLAS EPOXY POLE FILLER

35 lb. 12 oz. (16.2 kg.) Unit Consists of:

One - 4 lb. 12 oz. (2.2 kg.) can Resin

One - 4 lb. (1.8 kg.) can Hardener

One - 27 lb. bag (12.2 kg.) Powder

Coverage: Approximately 0.33 cubic feet (9.3 liters)

PHYSICAL PROPERTIES

ATLAS EPOXY POLE FILLER

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ASTM C905	129 lb./cu. ft. (2.07 g./cc.)
Tensile Strength, 7 days @ 77°F (25°C)	ASTM C307	1,900 psi. (13 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	8,600 psi. (59 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	4,000 psi. (28 MPa)
Flexural Modulus of Elasticity	ASTM C580	4.08 x 10 ⁵ psi. (2,815 MPa)
Water Absorption	ASTM C413	0.05%
Flammability	ASTM D635	V2 less than wood
Working Time, 75°F (24°C)		15-20 min.
Color		Natural

PHYSICAL PROPERTIES

ANCHOR-LOK PE POLE WRAP

PROPERTY	TEST METHOD	TYPICAL VALUE
Classification	ASTM D1248	Type 111, Grade W9
Density	ASTM D792	59.3 lb./cu. ft. (0.95 g./cc.)
Tensile Strength, 7 days @ 77°F (25°C)	ASTM D638	3,700 psi. (25.5 MPa)
Coefficient of Thermal Exp., in./in./°F (cm./cm./°C)	ASTM D696	6.9 x 10 ⁻⁵ (12.4 x 10 ⁻⁵)
Hardness, Shore D-2		66
Flexural Modulus of Elasticity	ASTM D638	140,000 psi. (965 MPa)
Water Absorption	ASTM D570	< 0.01%
Flammability	ASTM D635	Slow
Ultimate Elongation		660%
Notch Impact Strength, ft. lb. / in of notch	ASTM D256	6.46
Volume Resistivity		> 10 ¹⁵ ohm-cm
Approx. Wt. / Sq. Ft., 1/8" thick		0.8 lb. (363 g.)
Color		Black

ANCHOR-LOK PE POLE WRAP

Standard Rolls

32' 9"L x 59"W x 1/8"T (For all pole sizes)

Pre-cut

59"W x 78"L for Poles up to 67" circumference

59"W x 98"L for Poles up to 87" circumference

The principle benefits are:

1. Broken poles repaired in place.
2. Poles with groundline and below ground deterioration, from insects or fungal and bacterial rot, are restored in place.
3. Fire and vehicle damage repaired in place.
4. Repair materials are corrosion and weather resistant.

PREPARATION OF THE EQUIPMENT

Mixers - The materials may be mixed using hand tools or machine mixers. A KOL five-gallon mixer or a drill motor with a mixing paddle is satisfactory.

Vibrator - An air or electric vibrator, such as is used for vibrating concrete forms, will be helpful in compacting the repair materials. Fasten it on the exterior of the pole. Observe the Vibrator Manufacturer's Operating and Safety Instructions.

Funnels - A large funnel or a pouring trough, which can be readily formed from sheet metal or cardboard, is a help in placing ATLAS EPOXY POLE FILLER into the confined space of the form around a pole.

Hand tools and materials - Trowels or wide blade smoothing knives (like putty knives or dry wall smoothing blades) assist in finishing the surface of placed material. Hammers for nails or drivers for threaded fasteners are needed for installing containment forms.

Fasteners - Galvanized corrosion resistant screws or nails for fastening ANCHOR-LOK Pole Wrap.

Forms - ANCHOR-LOK sheeting is used for groundline repairs or when repairing a broken pole. This form is left permanently in place. Cut to encircle the pole with an overlap for fastening, allowing space (about 3/4" between the pole and the wrap) for placing polymer mortar. The anchor studs, on the back of the wrap, insure a uniform pouring cavity around the pole.

ATLAS EPOXY POLE FILLER must be stored at temperatures between 70°F (21°C) and 80°F (27°C) overnight or long enough for the materials in the containers to reach this temperature. In cool weather, carry the materials in the heated cab of the truck to keep them warm.

PREPARING THE POLE

Loose wood, soil, and other contaminants must be removed. Although the repair compounds will cure under wet conditions, better adhesion is obtained when surfaces are clean and dry.

Broken Poles: Remove loose, damaged or rotted wood. Re-align the pole and brace to hold in place for 24 hours while EPOXY POLE FILLER hardens. Wrap the pole over the break with ANCHOR-LOK, with the spacers against the pole. Close the lower annular space between the pole and the form so the EPOXY POLE FILLER will not run out the bottom when placed.

Groundline and below ground restoration - Dig away enough ground to gain access to the deteriorated

portions of the pole and to enable the ANCHOR-LOK wrap both to encircle the pole and to seat firmly in the soil. Measure around the pole and then cut the ANCHOR-LOK about 8" longer than the measured circumference. Remove all loose or deteriorated wood. Place the ANCHOR-LOK sheeting with the bottom edge against the ground and wrap the sheet around the pole with the anchors toward the pole. The ends will overlap. If necessary, use a hammer and chisel to remove a row of anchor studs to allow the overlap to mate tightly to the surface. Fasten through the overlap with screws or galvanized nails. This is the form to contain EPOXY POLE FILLER and, when the bottom edge is snug against the ground, will prevent the EPOXY POLE FILLER from running out the bottom when placed.

MIXING

EPOXY POLE FILLER is supplied in pre-measured unit packages with the resin, hardener and powder in the correct proportions. Combine the resin and hardener ingredients and mechanically mix until they are a uniform color. Then add the powder and continue mixing at least one minute until the desired consistency is obtained.

Smaller amounts may be mixed but care must be exercised to maintain the correct mixing ratios between the three components. When mixing smaller amounts than the unit sizes supplied, use the following ratio:

EPOXY POLE FILLER: One volume of resin to one volume of hardener and four volumes of powder.

APPLICATION**BROKEN POLES AND GROUNDLINE REPAIRS**

Use a placing funnel or trough. Pour mixed EPOXY POLE FILLER into the space between the ANCHOR-LOK form and pole, while vibrating the pole. When apparently full, continue vibrating for at least one minute. Continue adding EPOXY POLE FILLER as needed. When settlement stops, turn off the vibrator and smooth the top to form a sloped chamfer from the surface of the pole to the top of the form. Inspect the repair approximately one hour later and, if settlement has occurred, fill and smooth with freshly mixed EPOXY POLE FILLER to form a sloped chamfer between the surface of the pole and the form.

CURING

Rate of cure is dependent upon temperature. At 75°F (24°C), these materials should begin to harden in an hour. The ANCHOR-LOK wrap is left in place.

CLEANING OF TOOLS AND EQUIPMENT

Steel wool, soap and warm water will remove the materials referred to in this Data Sheet from mixing tools and equipment if cleaning is done immediately after use. Solvents, such as methyl ethyl ketone,

toluene or xylene, will have to be used after the material has begun to harden. Fully hardened material will have to be removed by mechanical means. Dispose of residues and wastes in accordance with the directions in the Material Safety Data Sheets and government regulations.

LIMITATIONS

Repair materials must be between 70°F (21°C) and 80°F (27°C) for best use. When air and surface temperatures are below 50°F (10°C), it is recommended that the repair area be tented and heated. Although the materials will set under wet conditions, the best adhesion is obtained when surfaces are dry. These materials can be stored for at least one year.

MAINTENANCE

Repair - Should the repair materials be found to have settled leaving empty space at the top of the repair, add freshly mixed material. In the event of any difficulties on any job with the use of ATLAS materials, the job should be stopped immediately and ATLAS' Technical Service Department consulted for assistance.

PRECAUTIONS

EPOXY POLE FILLER is for Industrial Use Only. It contains materials that present handling and potential health hazards. Consult Material Safety Data Sheets and the container labels for complete precautionary information.

RELATED INFORMATION

EPOXY POLE REPAIR SYSTEM Data Sheet (PI-010) titled "Restore Pole Tops - Fill Woodpecker Holes" provides restoration information.

WARRANTY

ATLAS warrants that its products will be free from defects in workmanship and materials under normal use for a period of one (1) year from the date of shipment by ATLAS (provided the products are installed before the expiration of the shelf life). THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR THE PURPOSE FOR THIS PRODUCT WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. ATLAS' LIABILITY FOR ALLEGED BREACH OF THIS WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT (BUT NOT INCLUDING REMOVAL OF THE DEFECTIVE PRODUCT OR INSTALLATION OF REPLACEMENT PRODUCTS), AND ATLAS SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES DURING THE WARRANTY PERIOD OR THEREAFTER. **ATLAS' WARRANTY IS VOIDED IF PAYMENT FOR PRODUCT IS NOT RECEIVED IN FULL.**