

# ENCAPSULAC®

## The only ACM Coagula-Tracer Fluid

For The Identification and Containment, of Asbestos Cement Pipe (ACP) particulates caused by trenchless rehabilitation procedures, (Asbestos Containing Materials) ACMs.

**Description:** EncapsulAC® is a proprietary dry-bagged powder which, when blended with water, produces a vibrant blue fluid. This environmentally friendly pumpable fluid coagulates and covers ACP fragments and fibres with a dyed gel holding them in a coagulated mass. Its unique blend seals the terraform and can withstand ground water wash. The EncapsulAC® Coagula-Tracer Fluid can be utilized with all conventional Trenchless Technologies as well as Open-cut rehabilitations to identify possible ACMs.



**Application:** EncapsulAC® is specially designed for ACP rehabilitation. Formulated for both water main and wastewater systems. ACP systems have exceeded their useful life putting them at high risk for leaks due to degradation. Utilizing EncapsulAC® for ACP rehabilitation eliminates the need to remove ACP, simultaneously improving safety by marking the presence of ACP fragments during future *installation, tapping or replacement* of pipe during repair and maintenance activities.

**EncapsulAC®** enables pipe owners to continue utilizing low cost Trenchless Infrastructure Rehabilitation Methods such as Pipe-Fracturing (aka; Pipe-Bursting), Pipe-Splitting, and Close Tolerance Pipe Slurrification (aka, CTPS). The vibrant blue Coagula-Fluid creates an easily identifiable indicator of ACMs. EncapsulAC® Coagula-Tracer Fluid creates a safer environment for Utility Contractors & the General Public.

CTPS has been approved by the US-EPA / NESHAP  
Federal Register / Vol. 84, No. 111 /  
Monday, June 10, 2019  
ENVIRONMENTAL PROTECTION AGENCY  
[EPA-HQ-OAR-2017-0427;  
FRL-9994-29-OAR]  
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**ENCAPSULAC® Coagula-Tracer Fluid**  
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# ENCAPSULAC®

## COAGULA-TRACER FLUID

INFRASTRUCTURE  
REHABILITATION

~~ASBESTOS CEMENT PIPE~~

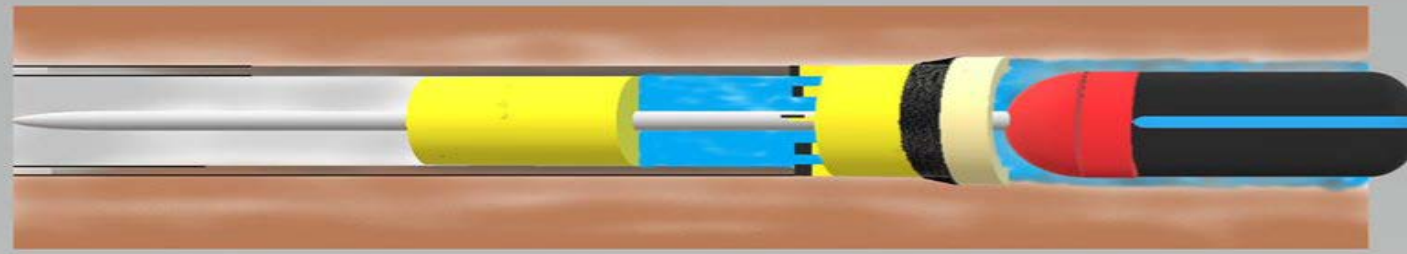
RE-LINE

TRENCHLESS



### Hybrid CTPS with EncapsulAC® Coagula-Tracer-Fluid & Tracer Wire

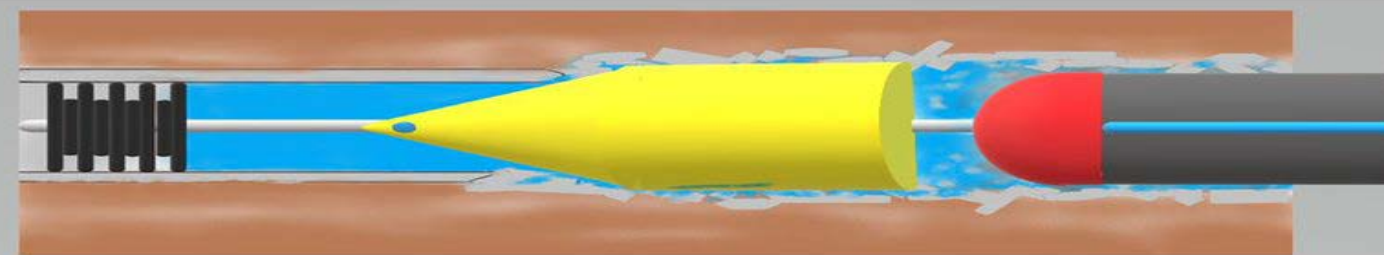
Renders Asbestos Cement Pipe (ACP) 100% Encapsulated, Identifiable and Traceable for Size-on-Size or Up-Size, All in One Shot



Compared To:

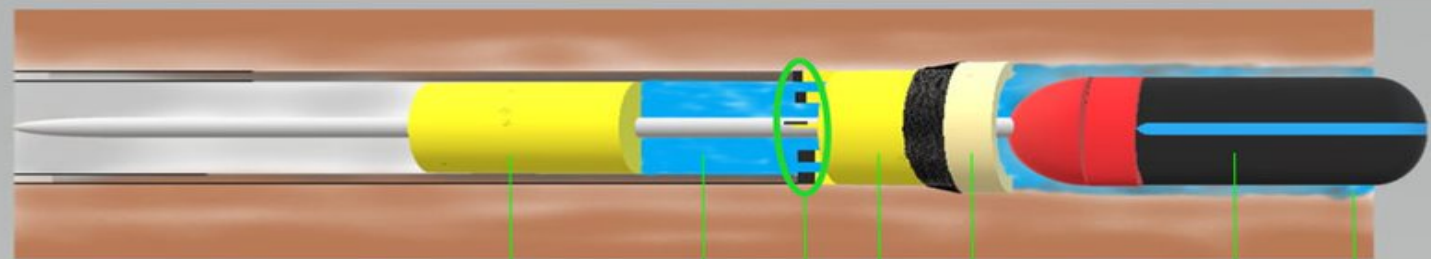
### Pipe Bursting with EncapsulAC® Coagula-Tracer-Fluid & Tracer Wire

Renders Asbestos Cement Pipe (ACP) 60% to 90% Encapsulated, Identifiable and Traceable for Size-on-Size or Up-Size, All in One Shot



### Hybrid CTPS with EncapsulAC® Coagula-Tracer-Fluid & Tracer Wire

Renders Asbestos Cement Pipe (ACP) 100% Encapsulated, Identifiable and Traceable for Size-on-Size or Up-Size, All in One Shot



Rotating Centralizer  
EncapsulAC® Encapsulant  
Cutters  
Slurrification Head  
Flared Tailing Ring  
New HDPE Pipe  
Skim Coat Slurry

#### Additional HDD & Specialized Equipment Required:

- Specialized Back Reaming Heads with Flared Tailing Ring
- Special Training and Certification is Required

The HDD rig is being rotated at 200 to 250 RPM with light pull back pressure. The rotating centralizer has cutters that clean interior of pipe and holds tooling on centerline in front of the slurrification head. The slurrification head also rotates as its cutters are being pulled into the profile face of the Asbestos Cement Pipe.

The ACP is reduced to a slurry as it is blended with the EncapsulAC® encapsulant. The slurrified mixture flows back along the circumference of the new pipe. This mixture of asbestos, cement and EncapsulAC® coagula-tracer-fluid acts as a skim coat. This skim coat produces a coagulated mass surrounding the new pipe. Its proprietary properties

*Note:*  
This represents a low capital investment for those in the HDD business.

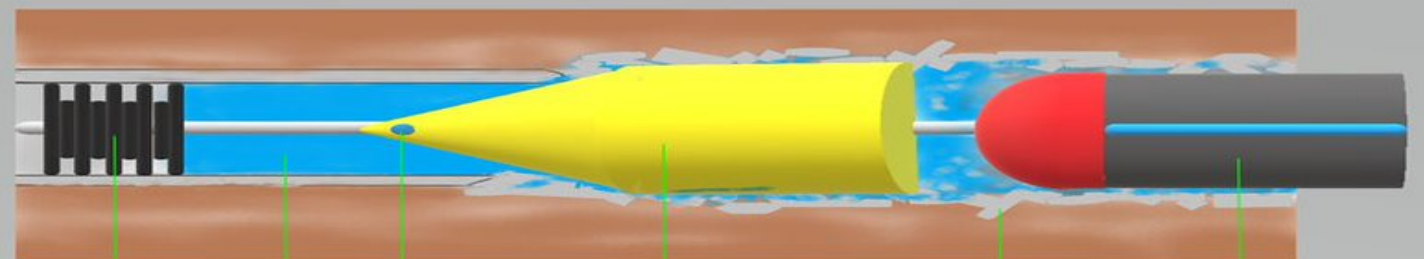
will not allow wash-out of color or fibers, yet remains digable. The slurry will not harden while buried.

For up-sizing use a centralizer for pipe size and an upsized slurrification head. The excess material can flow into forward pits. A bull-tail cable connected to front of new pipe may be needed to allow additional capacity for excessive cuttings.

To eliminate rotation of new pipe a rotation suppressor may be installed at tail end of new pipe, when tracer wire is required.

### Pipe Bursting with EncapsulAC® Coagula-Tracer-Fluid & Tracer Wire

Renders Asbestos Cement Pipe (ACP) 60% to 90% Encapsulated, Identifiable and Traceable for Size-on-Size or Up-Size, All in One Shot



Pig System  
EncapsulAC® Encapsulant  
EncapsulAC® Material Port  
Burst Head  
AC Pipe Shards  
New HDPE Pipe

#### Additional Static Pipe Bursting & Specialized Equipment Required:

- Flow-Thru Bursting Heads
- High Volume/High Pressure Mix & Pump System
- Delivery System
- Pig System

A pig is placed in front of a burst head to produce a reservoir of EncapsulAC® encapsulant to treat ACP fibers as cracks are formed. These cracks are filled and shards of pipe are pressed into the surrounding soil by the bursting head. Most of the shards will be broken several more times while traveling along side and past the burst head. These shards will not be fully encapsulated because, once the shards are pressed into the surrounding soil, only the shards along the top side of the pipe will experience gravitational pull and fall into the encapsulant following the burst head.

*Note:*  
This additional equipment represents a high capital investment for those in the pipe bursting business.

The delivery system either runs up through or alongside of the new pipe. Insertion through pipe may require additional equipment not listed above. If alongside is preferred, please note that poly-pipe may get torn away during the pull and will require reconnection. Additionally, the poly-pipe will be sacrificed and left in place.