

Solinst® Flute The Hidden Problem in Your Borehole

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Model 405 Solinst Flute Blank Liners

An open borehole in fractured rock can become a vertical superhighway for contaminants, distorting the very data you need to collect.

The Open Borehole Problem

Creates False Pathways

Water and contaminants from high-pressure fractures enter the hole, travel vertically, and flow into other fractures, causing cross-contamination.



Masks True Conditions

This cross-contamination makes it impossible to identify the true groundwater flow paths and contaminant distribution, leading to flawed site models.



Gives Misleading Data

Measurements for temperature or water chemistry are skewed, showing only major flow zones when many more may be active.



The Lined Borehole Solution

Seals the Entire Borehole

A flexible, impermeable 405 Solinst Flute Blank Liner is installed immediately after drilling, sealing tightly against the borehole wall from top to bottom.



Restores Natural Flow

The liner completely stops cross-contamination, isolating fractures and allowing for measurement of the true, undisturbed hydrogeologic system.



Provides High-Resolution Data

Performing a transmissivity profile while lining an open hole maps hydraulic features on a 6-inch scale



What Else a Borehole Liner Enables



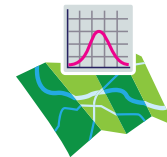
Depth-Discrete Monitoring

Specialized liners (405 Water Flute) allow for collection of groundwater samples from 15+ discrete zones in a single borehole.



Pinpoint Contaminants

A reactive liner cover (405 NAPL Flute) uses a special dye that stains on contact, precisely identifying the depth of free product. A 405 FACT (Flute Activated Carbon Technique) strip identifies contaminants in the dissolved phase.



Map Water Flow Paths

Measuring the liner's installation speed allows for a continuous, high-resolution profile of the borehole's Transmissivity (how easily water flows). A Reverse Head Profile can be developed upon removal of the liner to identify vertical hydraulic gradients that can be used to determine connectivity in fractured bedrock.

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Sealing a Borehole with Solinst Flute Blank Liners

The end of the liner is pulled off of a shipping reel and folded inside out forming an annular pocket. This annular pocket is then lowered down inside the casing and secured at the surface. Water is then added to the pocket to a level above the water table in the formation, creating the driving pressure necessary to start the eversion process.

The driving pressure allows the liner to propagate down the borehole (eversion), displacing the borehole water into open flow paths and seals the liner firmly to the borehole wall.

