

ARX-Transport™

Traditionally, underground void backfilling has used either hydraulic slurries or sand/cement/fly ash grouts. ARX-Transport consists of granular solids backfill material, foam, and a little water.

ARX-Transport Features & Benefits

- Cost effective - no costly cementitious binders such as cement or fly ash in the mix.
- Greatly reduced water usage - ideal for all projects, especially those with limited access to water.
- Foamed backfill material can be placed by pumping or by gravity methods.
- Concrete sand gradation is used as a baseline for backfill material - other sources could be used.
- ARX-Transport foam is safe for the environment and biodegradable.
- The foam dissipates, leaving only the backfill solids and complete filling could be achieved.



ARX-Transport moving foamed-sand in a dome-out above an abandoned coal mine room.

Foamed-Sand for Underground Void Backfilling



Aerix Industries™ has made advancements in the transport of backfill solids, such as concrete sand, beach sand, or waste crusher fines by using ARX-Transport foam. Foam replaces water as the backfill transport medium.

Mixing equipment can include drum-type mixers, volumetric mixers, pug mills, or other equipment platform and can be pumped with a piston-type concrete pump.

Performance Characteristics

A high-velocity flow is unnecessary for ARX-Transport to maintain suspension of the sand, enabling substantial flow distances from the discharge point. It does not set-up like grout and can remain fluidized for several days, leaving boreholes open to more filling.

A hydraulic backfill slurry at 50% solids by weight, requires 2,000 gallons of water to move 1 cubic yard of sand. By contrast, a mixture of ARX-Transport with 1 cubic yard of sand at 5% added moisture and 30% foam by volume, requires only about 135 gallons of water.



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Engineering Solutions for Project Savings

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