Tekseal®

Pumpable Construction Cement

The Tekseal® pumpable seal process is a revolutionary system for installing permanent underground ventilation seals.

Advantages

- Acid Mine Water Resistant – Determined as a result of months of MSHA testing in pH 3 water.
- Simple – Easy to install; eliminates requirement for hitching into roof, ribs and floor.
- Proven – Thousands of installations have been constructed in the USA alone.
- Ease of Use – Ideal for difficult to reach areas and/or areas in need of major rehabilitation for conventional seals.
- Labor Saving – Requires the fewest possible man hours.
- Safety – Less exposure time in questionable areas; less heavy work involved.
- Yieldable – Yields with ground pressure to 60% of original height before brittle failure - a substantial improvement over conventional seals, Tekseal® mimics the stiffness of the adjacent ribs. This helps maintain even stresses, resulting in reduced fracturing of the ribs and minimizing air leakage through the surrounding strata.
- Reduced Cure Times – By controlled increases in the product density, cure times can be as low as 3 days.
- MSHA Approved – All sizes of roadway entry approved for both 50 psi & 120 psi dynamic blast pressures. (See www.msha.gov for details.)

Consult your local Minova representative for additional application information and formwork construction details.

Description

The Tekseal® system is a simple, innovative, and the most cost effective permanent seal system for the mining industry. Formwork for the Tekseal® “plug” is constructed of timber cribs or posts, boards and brattice cloth. Alternatively, concrete blocks or steel prefabricated panels can be used. Supplied as a powder, the Tekseal® forms a low-density foam (0.6 to 0.8 specific gravity) when combined with a controlled amount of air and water in Minova’s specially designed placer unit. The 400 psi compressive strength mixture begins to gel in minutes, forming a non-toxic, non-combustible product weighing approximately 1200 lbs/yd^3. The lower causticity of the Tekseal® mix allows safer handling than with other standard cement products.

Packaging

45 lb, 3-ply bags with 1 polyethylene layer, 48 bags per stretch-wrapped pallet. Alternatively, Tekseal® is available in “super-sacks,” reducing handling, manpower and waste packaging issues.

Instructions for Use

To calibrate the placer unit and to make adjustments to the water supply, trained and certified supervisors are required and are available through Minova or authorized contractors. They must be on site to advise mine personnel, especially during the pumping process.

Remove all loose material from roof, ribs and floor at the seal site (no need to rebolt, hitch or grade).

Run at least 600’ of 1-1/4” slick line or hose from the placer to the seal site.

Hook up fresh water at a rate of 25 gpm at 50 psi, and AC power, to the placer. 15 gal of water per 100 lbs of Tekseal® powder are required.

Pump the mix into the formwork.

Placer

Made in the USA by Minova; Multi-use placer unit is used to transfer several of Minova’s cementitious products: Tekfoam, Tekcrib, Tekrok, Tekrok SCR

Motor: 20 hp AC; Full load amps - 21 @ 460V, 18 @ 575V;

Cable Size: normally #6.

,000’ through a 11⁄4” hose. For greater pumping distances, please contact your local Minova representative. Requires water supply @ 50 psi without the optional water heater, 100 psi with.

Dimensions: 3’6” x 2’3” x 11’9”;

Wgt: 1,700 lbs;

Unit capacity: 17.5 yds3/hour.

Water Heater – Required in some applications to bring the water temperature above 60°F.

Full load amps - 90 @ 460V, 110 @ 575V;

Cable Size: normally #2;

Dimensions: 3’2” x 3’4” x 3’10”;

Wgt: 1,700 lbs when full

Shelf Life

Three months in dry conditions.