

MINING

TEKSEAL®

MSHA-APPROVED PUMPABLE, PERMANENT, BLAST-PROOF VENTILATION SEAL SYSTEM

DESCRIPTION

Tekseal® is a cement-based non-flammable chemical grout product that forms a low-density foam when mixed with water via the Minova Tekplacer mixer. Material is then pumped into a pre-constructed form. TekSeal® mix is typically pumped 500-1000 feet through a 1 1/4-inch diameter hose. The product begins to gel in minutes forming a non-toxic, non-combustible product. Tekseal® can be used for installing permanent underground ventilation seals, general void filling and backfilling. It may also be used for general void filling and back filling. (See the TekSeal® TDS for cavity filling).

Supplied as a powder, Tekseal forms a low-density foam (0.6 to 0.8 specific gravity) when combined with a controlled amount of air and water. The 400 psi compressive strength mixture begins to gel in minutes, forming a non-toxic, non-combustible product weighing approximately 1200 lbs/yd.

USES

TekSeal® cement is a foamed mix which is primarily used to create pumpable seals. For applications other than explosion-proof seals, the strength can be adjusted to suit the application.

Consult your local Minova USA, Inc. representative for additional application information.



ADVANTAGES

- TekSeal® is MSHA approved for Main Line and GOB Seal applications at both 50 psi and 120 psi overpressures. (Go to www.msha.gov for details).
- Acid mine water resistant – determined as a result of months of MSHA testing in pH 3 water
- 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 minimizes air leakage through the surrounding strata.

APPLICATION METHOD

Pumpable Seals

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.

1. Remove all loose material from roof, ribs and floor at the seal site (no need to re-bolt, hitch or grade).
2. Run at least 600’ of 1 1/4-inch slick line or hose from the placer to the seal site.
3. 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.
4. Pump the mix into the formwork.

Placer

Made in the USA by Minova; Multi-use placer (Tekplacer) 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. Develops 200+ psi, and typically pumps Tekseal® cement 1,000 feet through a 1 1/4-inch hose. For greater pumping distances, please contact your local Minova representative. Requires water supply @ 50 psi without the optional water heater, 100 psi with heater. 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.

SAFETY INSTRUCTIONS AND LIMITATIONS

Good housekeeping is needed during storage, transfer, handling, and use of this material to avoid dust accumulation.

PACKAGING and TRANSPORTATION

TekSeal® is available in 45 lb. (20.41 kg) 3-ply bags with one polyethylene layer, 48 bags per stretch-wrapped pallet. Alternately TekSeal® is available in 1500 or 2000 lb. “super-sacks”, reducing handling, manpower and waste packaging issues.

STORAGE AND SHELF LIFE

Three months in dry conditions.

DISPOSAL

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

APPROVALS AND CERTIFICATES



an ISO 9001:2015
Quality Management System Certified Company.

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ADDITIONAL DOCUMENTATION

Started more than 135 years ago, Minova is a global manufacturer and supplier of chemical and mechanical earth control products and support equipment. With manufacturing plants on five continents and operations in more than 25 countries, Minova is an industry-leading provider of ground support solutions for the underground mining, construction and energy industries.

If further information is required consult Minova Americas website: www.minovaglobal.com.

- TekSeal®, TekSeal® Lite Safety Data Sheet (SDS)
- MSHA Approval Number 50M-02.1 – 50 psi Minova Main Line TekSeal® Installation Guide
- Minova Approval Number 120M-02.2 – 120 psi Minova Main Line TekSeal Installation Guide
- Minova Pumps for Mining Brochure
- Minova Pumpable Cement Grouts Brochure
- Minova TekSeal® Product Specification

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