



Technical Data Sheet

BC ELASTO PLUS

Specialized Grouting Compound for Geothermal Wells

1). Product Description

BC Elasto Plus is a premixed cement–bentonite grouting compound specifically formulated for the sealing and backfilling of geothermal wells and ground source heat pump (GSHP) systems. The product is a carefully balanced blend of blast furnace cement binders, high-grade bentonite, and selected fine silica sands, designed to provide superior sealing, stability, and thermal conductivity. This ready-to-use material ensures homogeneous filling, absence of voids, and excellent thermal transfer between the ground and geothermal pipes, resulting in long-term performance and system durability.

Key Features / Benefits

- Complete Sealing: Prevents voids and cavities, ensuring full contact between borehole and geothermal pipe.
- Fast Hardening & Thixotropic Behavior: Allows easy pumping and filling of vertical boreholes with uniform coverage.
- High Plasticity: Accommodates natural soil settlement while maintaining sealing integrity.
- Ready-to-Use Formula: Pre-mixed dry compound — minimizes site errors and ensures consistent performance.
- Environmentally Friendly: Free from harmful chromates
- Durable & Stable: Retains thermal and mechanical properties over the system's lifetime.

3). Typical Applications

- Grouting and backfilling of geothermal boreholes
- Ground source heat pump (GSHP) installations
- Sealing of vertical wells, boreholes, and injection holes
- Thermal grouting in energy piles and underground heat exchange systems



4). Technical Information

Property	Test Method	Typical Value
Appearance	Visual	Fine grey powder
Density (wet mixture)	EN 12350-6	~1.9 g/cm ³
Thermal Conductivity	DIN 52612	Up to 2.3 W/m·K
Water Requirement	Internal method	~6.0 – 7.0 L per 25 kg bag
Setting Time	ASTM C191	Initial: 90–120 min
Compressive Strength (7 days)	ASTM C109	>10 MPa
Plasticity / Flow	EN 445	Excellent
Shrinkage	EN 12617-4	Negligible
Chromate Content	EU 2003/53/EG	Free of chromates

5). Mixing & Application

1. Mixing Ratio: Add approximately 6.5 liters of clean water per 25 kg bag while mixing continuously until a uniform, lump-free slurry is obtained.
2. Equipment: Use a high-speed grout mixer or colloidal mixer for uniform dispersion.
3. Application:
 - Pump the prepared mixture into the borehole from the bottom up using a tremie or injection pipe.
 - Maintain continuous flow to avoid air entrapment and ensure complete filling.
 - Allow adequate curing before system activation.



Substrate Preparation

- Ensure boreholes or wells are free from loose particles, debris, and standing water before application.
- Verify proper placement of geothermal loops or casings prior to grouting.

6). Packaging

- 25 kg bag (premixed powder formulation)

7). Storage & Shelf Life

- Shelf Life: 12 months from the date of manufacture in original, unopened packaging.
- Storage Conditions: Store in a dry, shaded area between +5°C and +35°C. Protect from moisture, direct sunlight, and frost.

8). Environmental Considerations

- Contains no added solvents or hazardous substances.
- Environmentally compatible and safe for groundwater applications.
- Dispose of waste material according to local regulations.

9). Health & Safety

- Avoid direct contact with skin and eyes.
- Use suitable protective gloves, goggles, and clothing.
- In case of contact, rinse immediately with plenty of water.
- Refer to the BC Elasto Plus Safety Data Sheet (SDS) for full details on safe handling and disposal.

DISCLAIMER

The data presented in this sheet are based on laboratory testing and practical experience. Variations in substrate, application method, and environmental conditions may impact performance. Users are advised to carry out tests under their own conditions. Building Chemistry Industry's responsibility is limited to the product replacement in cases of proven manufacturing defect.

