

**MINING / CONSTRUCTION**

**CELBEX 653**

**THIXOTROPIC STABILIZER FOR CEMENT GROUTS**

**DESCRIPTION**

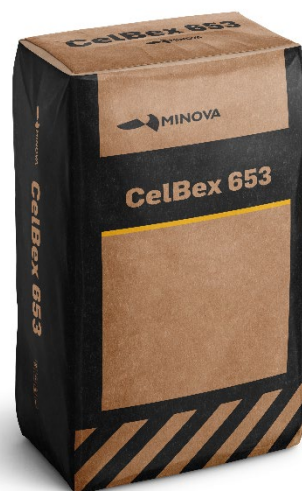
Celbex 653 is a blend of water-soluble, high molecular- weight polymers supplied as a white powder. It is designed to provide a stable polymer matrix enveloping every cement particle, which functions as a protective coating and thus prevents water washout.

**USES**

Celbex 653 is ideal for stabilizing cement grouts and cement grout blends, for pumping into cavities or fissures subject to water flow, or for pumping wherever grout has to remain in position without formwork. Typical uses include grouting secondary tunnel cavities and grouting fissures and cavities of all types, including granular fill and instances when “stop and stay” grouting is required.

**ADVANTAGES**

- Enables cement grouts to be used in moving water conditions
- Increased productivity in tunnel ring grouting
- Gelation is almost instantaneous. This is a major contributing factor for rapid tunnel excavation



**MIXING INSTRUCTIONS**

Mix grout by adding cement into the mixing water. Agitate until completely mixed, and then add Celbex 653 as a slow stream into the mixer. Mix for 30 seconds to disperse admixture throughout the grout. The grout will thicken within 2 to 5 minutes, so discharge should take place before this time. Holding tanks will require a discharge port of at least 3 inches in diameter (75 mm.) to facilitate increased passage of the thickened grout.

Mixes containing Celbex 653 may be blended in standard grout mixing equipment. The mixed grout is highly thickened; only non-valved pumps are recommended for placement. Suitable pumps would be hopper-fed Moyno pumps and double- or single-drum mixer pumps.

Celbex 653 is added to the grout at the rate of:

- 1/4 lb per 94 lbs of Portland cement

- 113 grams per 42.6 kilograms of Portland cement

Continued>

**Note:** This addition rate must be applied only to the Portland cement fraction, when Portland cement is batched with fly-ash, for example.

**PHYSICAL PROPERTIES**

The addition of Celbex 653 will not significantly alter the initial hardness of cement grout but rather the gelation which occurs immediately after pumping has stopped. This makes the grout appear to have reached its initial set instantaneously.

**SETTING TIMES:**

*The following are typical results for a neat cement grout.*

Admixture	W/C	Setting Time
Neat Cement	0.45	7 hours
Celbex 653	0.45	8 hours

**TYPICAL COMPRESSIVE STRENGTHS:**

*These are slightly reduced by introduction of Celbex 653.*

Times	Neat Cement (psi)	Celbex 653 (psi)
18 hours	580 psi	435 psi
24 hours	1015 psi	725 psi
7 days	4640 psi	3625 psi
28 days	7540 -psi	6380 psi

**SAFETY INSTRUCTIONS AND LIMITATIONS**

Observe the usual precautionary measures for safe handling, see Celbex 653 SDS

Use water to clean material from skin and clothing.

**PACKAGING AND TRANSPORTATION**

A 40-lb standard unit (18.2kg) is placed in bag, 48 bags per pallet.

**STORAGE AND SHELF LIFE**

Unused quantities may be stored for up to 24 months. Material deteriorates in the presence of moisture and should be stored in dry areas.

**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](http://www.minovaglobal.com).

- Celbex 653 Safety Data Sheet (SDS)
- Minova Pumpable Cement Grouts Brochure
- Minova Pumps for Mining Brochure
- Strata Injection and Cavity Fill Chemicals – Minova Master Product Catalogue

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