

EMBECO® 636 GROUT

Nonshrink, metallic aggregate grout

DESCRIPTION:

EMBECO® 636 grout contains metallic and quartz aggregates and is formulated to be used at any consistency from fluid to damp-pack. It is recommended for applications requiring precision support where early form stripping and/or shoulder trimming are required*.

RECOMMENDED FOR:

- Machinery and equipment requiring high strength, maximum-bearing, impact-resistant, nonshrink grouting
- Paper machine soleplates, including hooded dryer sections
- Turbines, generators and centrifugal compressors
- Applications where shrinkage must be eliminated to achieve full bearing and load transfer
- Rolling, stamping, drawing and finishing mills for the steel and aluminum industries
- Anchor bolts and rods

FEATURES/BENEFITS:

- Meets the compressive strength and nonshrink requirements of CRD-C 621, Corps of Engineers Specification for Nonshrink Grout and ASTM-C 1107.
- Hardens free of bleeding, settlement or drying shrinkage when mixed, placed and cured at any consistency, fluid, flowable, plastic or damp-pack, at temperatures above 45 °F (7 °C).
- Designed for use where thermal movement and other effects of heating/cooling and wetting/drying are anticipated.
- Metallic reinforcement enhances performance under conditions of dynamic and repetitive loading.

PACKAGING/ESTIMATING:

EMBECO 636 grout is packaged in 55 lb (25 kg) moisture-resistant bags.

One 55 lb (25 kg) bag of EMBECO 636 grout mixed with 10.5 lb (4.8 kg) [1.26 U.S. gallon (4.8 liter)] of water produces approximately 0.43 ft³ (0.012 m³) of grout.

PERFORMANCE DATA:

Typical Compressive Strengths

	CONSISTENCY					
	Plastic ¹		Flowable ²		Fluid ³	
	psi	MPa	psi	MPa	psi	MPa
1 day	3,600	25	3,300	23	2,200	15
3 day	6,200	43	5,500	38	4,200	29
7 day	8,000	55	7,000	48	5,800	40
28 day	10,000	69	8,500	59	7,500	52

¹100% flow on flow table, ASTM-C 230, 5 drops in 3 seconds.

²135% flow on flow table, ASTM-C 230, 5 drops in 3 seconds.

³20 to 30 seconds flow by Corps of Engineers Flow Cone Method, CRD-C 611.

NOTE: The data shown are based on controlled laboratory tests. Reasonable variations from the results shown above can be expected. Field and laboratory tests should be controlled on the basis of the desired placing consistency rather than strictly on the water content.

If the work requires that strength tests be made at the jobsite, do not use cylinder molds. Use 2 in. (50 mm) cube molds per ASTM-C 109. Consult your local Master Builders representative for special procedures required when mixing and casting cubes of fluid, non-shrink grout for compressive strength tests, CRD-C 622, as modified for premixed products.

Strength Development

The strength of the grout is often the determining factor in deciding when loads can be put on grouted structural members or machinery. The strength is dependent on the amount of mixing water, temperature of the object grouted, curing and age of the hardened grout.

Use of ice water in warm environments to produce an ideal, as-mixed grout temperature of 50 °F to 65 °F (10 °C to 8 °C) will reduce the amount of water required for a given consistency, and increase both working time and ultimate strength.

APPLICATION:

Consult the EMBECO 636 product bag for details on the installation of EMBECO 636 grout.

Master Builders recommends that the user request the services of the local representative for a pre-job conference to plan the installation.

* Where early form removal is not required and extended working time is needed, EMBECO 885 grout offers extended working time and higher ultimate strengths.

CURING:

Cure all exposed grout shoulders by wet curing for 24 hours and by applying a Master Builders recommended curing compound, such as MASTERKURE®.

LIMITATIONS:

- The mixed temperature of the grout should be in the range of 45 °F to 70 °F (7 °C to 21 °C). Adjust the water temperature to keep the mixed grout temperature within this range. Do not use water in an amount or at a temperature that will produce a flow of less than 20 seconds (CRD-C 611) or cause the mixed grout to bleed or segregate. Special information on high and low temperature grouting techniques is available from your local Master Builders representative.
- For pours greater than 6" deep consult your Master Builders representative.
- When the grout will be in contact with prestressed and post-tensioned cables, rods and anchorages which are or will be stressed over 80,000 psi (552 MPa), use MASTERFLOW® 816 cable grout.

RELATED BULLETINS:

Material Safety Data Sheet - EMBECO 636

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