

MasterEmaco[®] S 105 PG

(PC Mix Fluid)

Fine-grained, shrinkage-compensated pourable dry mortar. Application thickness varies from 40 to 200 mm.

DESCRIPTION

MasterEmaco S 105 PG is a ready-to-use material available in the form of a fine-grained dry mortar. When mixed with water, it forms a pourable, non-delaminating, high-strength grout. Due to its intrinsic properties, MasterEmaco S 105 PG allows concreting by placing the material into formwork, without vibration compaction, during the construction or repair of heavy-reinforced structures. Material application thickness varies from 40 to 200 mm and may be increased by adding a coarse aggregate.

RECOMMENDED USE

MasterEmaco S 105 PG is recommended for use in the following areas:

- Concreting of reinforced (including pre-stressed) structures - beams, supports, bridge plates, etc.;
- Grouting under base plates of steel structures and process equipment, experiencing high dead loads, as well as for anchor installation;
- Concreting of heavy reinforced structures if pneumatic mortar placing is impossible;
- Due to a high fluidity, MasterEmaco S 105 PG is recommended for concreting in those cases where vibration compaction of the poured concrete may not be used;
- Grouting of joints of precast reinforced concrete structures (concrete supports, slabs, etc.);
- Concreting in cases where the delivery or supply of ready-mixed concrete is problematic. E.g., railway bridges, tunnels, headers, high-rise facilities, supports and foundations of high-voltage lines, etc.

PACKAGING

MasterEmaco S 105 PG is packed in 30 kg sacks.

COVERAGE

2100 kg of MasterEmaco S 105 PG is required for preparing 1 m³ of the concrete mix.

SHELF LIFE AND STORAGE CONDITIONS

Guaranteed shelf life of MasterEmaco S 105 PG, stored in a closed undamaged packaging, is 12 months. Store the material in the manufacturer's package in enclosed dry rooms at the humidity not exceeding 70%, at the conditions, which ensure safety of package and moisture protection.

SPECIFICATIONS

(Table 1)

Indicator	Control method	Rated value
Dry mortar moisture, %	GOST 8735	max 0.1
Maximum aggregate size, mm	GOST 8735	3.0
Breaking cone fluidity, mm	GOST 310.4-81	min 260
Working time, min	STO 70386662-010-2014	min 30
Compressive strength <ul style="list-style-type: none">• 24 hrs• 28 days	GOST 310.4-81	min 15.0 min 45.0
Flexural strength: <ul style="list-style-type: none">• 24 hrs• 28 days	GOST 310.4-81	min 3.0 min 5.0
Frost resistance grade (in salts)	GOST 10060-2012	F ₂ 200
Water proofing grade, not lower	GOST 12730.5	W8
Air entrainment	GOST 10181	max 6%
Adhesion to concrete in 28 days, MPa	STO 70386662-010-2014	min 1.5
Specific effective activity of natural radionuclides, Bq/kg	GOST 30108	max 370

CONCRETING NOTES

MasterEmaco S 105 PG may be used at the ambient temperatures of not lower than +5°C. (At the ambient temperatures below +5°C, heating loops or heat tracing are required).

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1. PREPARATORY ACTIVITIES

Formwork installation: Formwork shall be made of a durable material and should be tight and securely fastened to withstand the mortar pressure after pouring. The formwork shall have a special opening for air vent. Before starting pouring, the formwork should be impregnated with water so that it would not absorb water from the mortar, thus dehydrating it. To prevent mortar leakage, the formwork shall be sealed. For this purpose, MasterSeal 590 may be used. Do not use any fabric for sealing the formwork, since difficulties associated with the fabric removal may occur.

2. MIXING

Before mixing MasterEmaco S 105 PG with water, the following is required:

- Make sure that all necessary materials (mixer, trucks, buckets, trowels, etc.) are close at hand;
- Check whether the available amount of the material is sufficient enough for work completion;
- Verify the performance of the preliminary activities described in Items 1 - 3 herein
- "Concreting Notes". Mix only that amount of the mortar which can be used within 30 minutes (at the ambient temperature of +20°C).

For correct mixing, follow the instructions below:

- a) Open the sacks with the MasterEmaco S 105 PG dry mortar, required for work performance, shortly before mixing;
- b) Pour the required amount of water indicated in Table 2 into a mixing vessel. The water flow may vary slightly dependent on the temperature and humidity of the environment. At the ambient temperature above +30°C, use cold water for concrete mixing. This will extend the working time of the mortar. At the ambient temperature below +10°C, use warm water for concrete mixing.
- c) Turn the mixer on, and quickly and continuously add the material;
- d) Once all required amount of the dry mortar is added, continue mixing for at least 4 minutes. The ready-to-use mix

shall be fluid and lump-free. For mixing small amounts of MasterEmaco S 105 PG, a slow-speed drill with a spiral nozzle may be used. Mixing by hand is not allowed. If a layer of above 200 mm in height is required, add washed gravel (crushed stone) in the amount of up to 30% (by weight) of the dry mortar.

Water consumption for mixing MasterEmaco S 105 PG. (Table 2)

Amount of water, liters per 30kg sack	
Minimum	Maximum
3.9	4.2

3. APPLICATION

The prepared concrete mix should be placed continuously, without vibration. Pour the mortar from one side to avoid air entrapment. Also, while placing MasterEmaco S 105 PG into heavy reinforced structures, puddle the material poured, in order to avoid air entrapment under the reinforcement space.

4. TREATMENT

Following pouring and further formwork stripping, a proper water treatment regime should be provided for the poured concrete for at least 24 hours, to be extended up to 2 days in case of hot, dry, windy weather. For this purpose, use standard cement-bearing material treatment procedures (cover the surface with a film or wet burlap; spray water), or apply the special film-forming compositions (MasterKure 216, MasterKure 220).

PRECAUTIONS

This product contains cement, irritating the skin and mucous membranes. Avoid eye and skin contact. In case of irritation, thoroughly wash the affected area with water and consult a doctor, providing the information about the product.



We create chemistry

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Represented information is based on our current experience. In case of various factors affecting the result, information does not mean legal responsibility. For additional information, please contact your local advisor.

As far as new materials production is periodically renewed, company has the right to change description of material without informing clients. When a new description is launched, an old one is to expire. Before the usage of a material, make sure that you have an appropriate description at the moment.

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