

Technical Sheet

REBOTEC

CONCRETE





1. DESCRIPTION

REBOTEC CONCRETE is a water-repellent aggregate developed especially for addition to the concrete mix at the time of its production.

2. INDICATIONS FOR USE

Beams, balus, concrete machined on site, prestressed, reinforced and projected.

Additives Allowed	Not allowed
Surfactant-based air entrainer	NON Surfactant-based air entrainer
Polycarboxylate ether-based superplasticizer	Other waterproofing agents
Polyfunctional plasticizers	
Lithium nitrate	
Setting retarders	

3. NOT SUITABLE FOR

- Release surfaces. Examples: paints, oils, asphalt blanket, smooth surfaces without adhesion and other waterproofing agents;
- Farofa-type subfloors with low water/cement factor;
- Aggregates and waterproofing products from other brands;
- For more information, consult the technical department of Rebotec Brazil.

4. ADVANTAGES

- It becomes an integral part of the concrete, resulting in a sturdy and durable structure;
- Allows concrete to breathe;
- It is non-toxic (ABNT NBR 12170:2017: Waterproofing materials – Determination of water potability after contact);
- Best cost/benefit;
- Makes the planning of the work more flexible;
- Improves the durability of concrete;

- Permeability reducing aggregate for hydrostatic conditions;
- Zero VOC – The powder product contains zero volatile organic compounds and is safe to use both outdoors and in confined indoor spaces.

5. INSTRUCTIONS FOR USE

5.1 Dosage

8% of cement weight for thickness from 1" to 3,15" / 2cm to 8cm. (Eg. Plaster).
4% of cement weight above 3,15" / 8cm of thickness (Eg. Concrete in general).

5.2 Mixing

REBOTEK CONCRETE must be added to the concrete at the time of its production. The sequence and addition procedures vary according to the type of operation, the plant and the equipment.

5.2.1 Ready-mix concrete

The aggregates, cement and water must be mixed in the plant according to the usual procedures (taking into account the amount of water that has already been placed in the concrete mixer truck). Pour the **REBOTEK CONCRETE** little by little into the truck flask and mix for at least 5 minutes to ensure a homogeneous distribution of the **REBOTEK CONCRETE** in the mixture.

6. SPECIAL CONSIDERATIONS

When adding **REBOTEK CONCRETE**, the temperature of the concrete should be above 4°C.

7. TECHNICAL DATA

7.1 Appearance and composition

- Color: Grey
- Composition: Silicon dioxide, portland cement, soluble silicas and mineral base A (industrial secret).

7.2 Properties and Features

- Appearance: solid – powder;
- Odor: Characteristic of Cement.

- Relative density: 1.29 g/cm³;
- Flammability: non-flammable solid;
- Solubility: insoluble.

8. PERFORMANCE OF CONCRETE WITH REBOTEC CONCRETE

Table 1. Test results required to obtain the CE mark for specimens with and without Rebotec Concrete.

	Without Rebotec (Control)	With Rebotec	Standards
Hair Absorption	0.024 g/mm ²	0.013 g/mm ²	EN 480-1
Air content in fresh concrete	1,6 %	2,0 %	EN 12350-7
Compressive Strength - (28 days)	38.7 MPa	33.6 MPa	EN 12390-3
Soluble chloride content	--	0,07%	EN 480-10

*Results based on CE 1377/CPR/ADI-0007.

Table 2. Test results of ASTM C494/C494M and ASTM C1585 classified as Type S aggregate.

	Without Rebotec (Control)	With Rebotec	Norm
Slump (cm)	9,53	9,53	ASTM C143
Air content in fresh concrete (%)	6,3	6,4	ASTM C138
Compressive Strength 28 days (psi)	5,52	5,36	ASTM C39
Compressive Strength 90 days (psi)	6,37	6,27	ASTM C39
Tension at Flexion 28 days(psi)	750	725	ASTM C78
Dimensional Variation (%)	-0,022	-0,024	
Freeze and thaw resistance, 300 cycles (%)	---	98	ASTM C666
Water Absorption (mm) 9 days	3,28	1,79	ASTM C1585

Table 3. Results of the requirements for the ABNT NBR 6118 standard.

	Without Rebotec (Control)	With Rebotec	Norm
Air content in fresh concrete (%)	2,5	3,3	ABNT NBR 16887:2020
Compressive Strength 28 days (MPa)	28,4	30,7	ABNT NBR 5739:18
Water Absorption by Capillary (g/cm ²)	2,27	0,28	ABNT NBR 9779:12
Height of Capillary Rise (cm)	7,7	2,7	ABNT NBR 9779:12
Determination of Pressure Water Penetration (mm)	140	13	ABNT NBR 10787/11

9. PACKING

1.8 kg bucket, 10 kg bag, 225 kg barrel and 1 TON big-bag.

10. VALIDITY

24 months from the date of manufacture printed on the packaging.

11. WAREHOUSING

Store the product in a covered, cool, dry and ventilated place.

12. HANDLING AND SAFETY

- Wear safety goggles and gloves for protection;
- Keep the product in its original and unopened packaging;
- Keep out of reach of children and animals;
- If contact with the skin and consequent dryness occurs, wash with plenty of running water;
- In case of ingestion of the product, the doctor should be consulted;
- For more information, see the Safety Data Sheet for Chemical Products - MSDS.

REBOTECH BRASIL COMÉRCIO DE MATERIAIS
DE CONSTRUÇÃO LTDA
CNPJ: 27.568.755/0001-43. RODOVIA SC 414,
12536, VILA NOVA, LUIZ ALVES, SC, BRAZIL.
CEP 89.128-000.



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EN 934-2

HIDRÓFUGO T.9

REBOTECH IMPERMEABILIZANTE

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