



# PENTAMIX IT.1

## Additive for thixotropic, anti-shrinkage mortars for repair works

Technical Data Sheet, September 2015

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<b>DESCRIPTION</b>	<p><b>Pentamix IT.1</b> is an additive in powder form to be added to cement and sand in the preparation of mortars, used in the restoration of ruined walls and structures in concrete</p>
<b>FEATURES</b>	<p><b>Pentamix IT.1's</b> formulation derives directly from Pentamix IT with the only difference of a new generation anti-shrinkage agent, which allows lower dosage and lower costs. It is mostly used in mortars with a low plastic shrinkage.</p> <p>Thanks to its particular composition, <b>Pentamix IT.1</b> gives fresh mortars excellent plasticity and easiness in application, as well as excellent wet adhesion to the supports while avoiding waste and sliding during the restoration of vertical walls or ceilings.</p> <p>In the hardened state, mortars containing <b>Pentamix IT.1</b> are highly resistant, waterproof and hydraulic shrinkage-free. That allows solid, effective and lasting repairs.</p> <p>Mortars containing <b>Pentamix IT.1</b>, produced according to our directions, allow to obtain perfectly smooth surfaces that can be later treated with all types of finishing</p>
<b>USE</b>	<p><b>Pentamix IT.1</b> is added to the other components of the mixture in the mixer until obtaining perfect homogenisation</p> <p>It is advisable to use clean sand, preferably siliceous or crystalline –calcareous, with grain size up to 2.5 mm and a well-assorted granulometry.</p> <p>The recommended ratio between sand and cement (preferably Portland 42.5 R) is 2 to 1.</p> <p>The quantity of water for the preparation of the mortars must be as low as possible, compatibly with the consistency required by the specific application.</p> <p>Besides, It is advisable to apply mortars containing <b>Pentamix IT</b> on wet, but not water- drenched supports. This allows a better hydration of the cement binder and a better adhesion to the support.</p> <p>When reparation works have to be done on reinforced concrete where rods are oxidized and degraded it is indispensable to clean and protect them against subsequent oxidation before applying the mortar for the repair work.</p> <p>Moreover, if the structure under repair is subject to vibrations or volumetric fluctuations due to frequent and considerable temperature ranges, it is advisable to introduce polypropylene fibres no longer than 12 mm into the mortar and to apply cement slurry of semi-elastic type between the support and the mortar to improve the stability of the repairs.</p>

	Data	Method
<b>TECHNICAL DATA</b>		
<b>State:</b>	Powder	Visual
<b>Colour:</b>	Beige	Visual
<b>Bulk Density:</b>	0.550 ± 0.100 kg/dm <sup>3</sup>	IST. 10.07
<b>Granulometry:</b>	Min. 90% < 0.180 mm	IST. 10.09
<b>Humidity :</b>	Max. 6.0 %	IST. 10.04
<b>Water solubility:</b>	Partially soluble	IST. 10.21

**DOSAGE**

The recommended dosage of **Pentamix IT.1** is 1 - 2% of the total weight of the dry mixture. Different dosages can be used depending on the desired results after carrying out preliminary tests.

**STORAGE AND VALIDITY**

**Pentamix IT.1** has a 12-months validity, if it is stored in a dry place and in the original perfectly closed bags. Should moisture be absorbed by the product, this does not affect its efficaciousness, but it makes its dosage difficult and the dispersion in the finished mixture not homogeneous.

It is therefore advisable to close the bags carefully after each collection.

**PRECAUTIONS**

**Pentamix IT.1** is neither irritating nor harmful for the skin. It can cause red eyes and an irritation of the first part of the respiratory tract, because of the alkalinity of its components. It is therefore advisable to use dust masks and protective glasses while handling it.

It can be easily removed from any surface with water and soap.

In case of accidental loss it must be picked up in the dry state and discharged in an authorised waste dump.

Keep out of children's reach. Do not disperse the product and the bag in the environment.

Refer to the relevant safety sheet for further information about safety

**PACKAGING**

25-kgs paper bags

The specifications stated in this report have been got either through standardized tests and rules or their modifications following Pentachem systems. The methods applied can be requested to our technical service.

All the data stated in this technical sheet are based on our knowledge and experience. However, before using the item differently from indicated, it is advisable to carry out preventive tests. In any case, PENTACHEM does not assume any responsibility for any damage or defect caused by the use of our products, as the employment conditions are not under our control. We also inform that our technical service is at our customers' disposal for any information concerning the correct employment of our products.