



## MULTI-PURPOSE SET RETARDING & BOND ENHANCING MORTAR ADMIXTURE

**Description:** WIN 200 is a liquid concrete admixture specially developed to enhance early-age strength development and improve production efficiency in lightweight pumice (bims) block manufacturing. The product promotes early hydration reactions, improves matrix densification, and increases block stability immediately after pressing in semi-dry production systems.

### Technical Properties:

<b>Chemical Content</b>	Inorganic salt
<b>Appearance</b>	Liquid
<b>Color</b>	Light brown
<b>pH</b>	10±1
<b>Density (20 °C)</b>	1.22 ± 0,02 g/cm <sup>3</sup>
<b>Chloride Content (%)</b>	< 0.1
<b>Alkaline Content (%)</b>	< 5
<b>Freezing</b>	-10 °C

### Advantage:

- Enhanced early-age compressive strength development.
- Improved green strength after demoulding.
- Increased production efficiency.
- Optimized hydration kinetics.
- Reduced risk of early cracking.
- Maintains long-term strength performance.

### Area of Use:

- Lightweight pumice (bims) blocks.
- Semi-dry concrete block production.
- High-speed manufacturing plants.
- Production systems requiring faster pallet turnover.

### Dosage:

The recommended dosage of WIN 200 is between 1.3% and 1.8% by weight of cement, depending on the required level of early-age strength development and production conditions. The exact dosage should be determined through preliminary laboratory and plant trials, taking into consideration cement type, fineness, aggregate characteristics, water content, and ambient temperature. Adjustments may be required in cases of high supplementary cementitious material (SCM) content or extreme temperature conditions. When required, the Polystar Co. Technical Support Unit should be consulted.

**Method of Application:** WIN 200 specifically designed for use in semi-dry lightweight pumice (bims) block production systems. The admixture should be added to the mixing water or dosed directly into the mixer during the mixing cycle. For optimum performance, it is recommended to introduce the product after the dry materials (cement, pumice aggregates, and fillers) have been homogenized.

### Recommended Procedure:

- Load pumice aggregates and cement into the mixer.
- Dry mix for 15–30 seconds to ensure uniform distribution.
- Add approximately 70–80% of the total mixing water.
- Introduce the calculated dosage of WIN 200 admixture.
- Add the remaining water and continue mixing until a homogeneous semi-dry consistency is achieved.

Total mixing time may vary depending on mixer type and plant configuration but should be sufficient to ensure full dispersion of the admixture throughout the matrix.

### Important Application Notes:

- Water content must be carefully controlled to maintain optimal semi-dry consistency.
- Overdosing may lead to excessive acceleration and reduced workability.
- Trial batches are strongly recommended before full-scale production.
- In cold weather conditions, performance may vary and dosage adjustments may be necessary.

**Standards:** - EN 934-2 Table 7 - ASTM C 494 Type C

**Compatibility:** WIN 200 admixture is compatible with other POLYSTAR plasticizer admixtures used in the same concrete mix.

### Precautions in Application:

- The admixture must be thoroughly dispersed in the mix to ensure uniform performance. Insufficient mixing may result in inconsistent strength development.
- Water content must be carefully controlled in semi-dry systems. Excess water may reduce green strength, while insufficient water may negatively affect hydration.
- Dosage should not exceed the recommended range without prior laboratory validation. Overdosing may cause excessive acceleration, increased shrinkage risk, or surface cracking.
- The product should not be combined with other accelerating admixtures without compatibility testing.
- Cement type, sulfate balance, and alkali content may influence performance. Trial mixes are strongly recommended when changing cement suppliers.
- In hot weather conditions, hydration may accelerate rapidly. Production parameters and curing conditions should be adjusted accordingly.
- In cold weather, extended mixing time or dosage adjustment may be required.
- Ensure that storage tanks and dosing equipment are clean and free from contamination.



**Cleaning:** WIN 200 admixture can be washed with fresh cold water and should not be allowed enter sewers or open bodies of water.

**Packing:** 30 kg plastic drum - 250 kg drum - 1000 kg container Bulk

**Storage and Shelf Life:** Must be stored at temperatures between +5°C and +45°C. Under proper storing conditions, the product's shelf life is 24 months from production date if kept in original packaging unopened and undamaged. Packaged products must be shaken before use.

**Security Information:** Use protective clothes, gloves, glasses and mask compatible with Health and Safety regulations during the application. It should not contact skin and eyes. In case it contacts to skin and eyes, rinse it with water and if swallowed ask for medical help. Food and beverage should not be allowed in the application area. It should be stored at the reach out of the children. The Material Safety Data Sheet (MSDS) should be read for detailed information.

