TECHNICAL DATA FOR BS SKYCAST PRECAST 50

Strength & Density Improver for Blocks, CLC & Masonry Precast

Description of BS Skycast Precast 50

BS Skycast Precast 50 is a **performance-oriented admixture** developed for **block manufacturing, CLC elements, fly ash bricks, and masonry-type precast products,** where **uniform strength development, density control**, **and shape stability** are critical.

The product is engineered to **improve internal matrix development**, resulting in **denser concrete, more consistent compressive strength, and reduced internal voids**, particularly in **lightweight and semi-dry concrete systems**. It supports **repeatable production quality** across high volumes and helps reduce **breakage during stacking, transportation damage, and strength-related rejections**.

In short:
Skycast Precast 50 is designed to **make blocks and masonry precast stronger, denser, and more uniform—without increasing production complexity.**

Where This Product Acts in the Precast Cycle

BS Skycast Precast 50 acts across the **matrix formation and early strength development stages**:

- **Batching & Mixing:** Improves cement dispersion and paste distribution
- **Casting & Vibration:** Enhances internal packing and density
- **Green Concrete Stage:** Builds uniform early rigidity
- **Demould Stage:** Improves shape retention and edge stability
- **Curing & Handling:** Reduces internal weakness and breakage

Core Problems Addressed

BS Skycast Precast 50 is designed to control the following **masonry precast issues**:

1. **Low or inconsistent compressive strength across batches**
2. **High breakage during stacking, curing, or transportation**
3. **Excessive internal voids affecting density and durability**

Technical Performance (Expected)

Parameter	Typical Effect*
Compressive strength uniformity	Improved
Block density	More consistent
Internal voids	Reduced
Edge and shape stability	Improved
Breakage during handling	Reduced

*Actual performance depends on cement type, moisture control, compaction energy, and curing practice. Plant trials are mandatory.

Dosage Guidance

By Weight of Cement (% bwoc)

Dosage Band	% bwoc	Use Guidance
Safe	0.50 – 0.75%	Initial trials
Standard (Recommended)	**0.75 – 1.25%**	Most block & CLC production
Aggressive (Trial only)	1.25 – 1.75%	Low cement mixes / high flyash

By Cement Bag (50 kg)

Dosage Band	gm / bag
Safe	250 – 375 g
Standard (Recommended)	**375 – 625 g**
Aggressive (Trial only)	625 – 875 g

Important: Skycast Precast 50 is **not a fast accelerator**. Expect strength improvement, not drastic cycle reduction.

Application Instructions (Precast-Specific)

1. Load aggregates, cement, and fly ash (if used) into the mixer.
2. Add **70–80% of total mixing water** and mix thoroughly.

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3. Add the measured quantity of BS Skycast Precast 50 with the remaining water.
4. Mix for a **minimum 2 minutes** to ensure uniform dispersion.
5. Proceed with block moulding and compaction as per standard practice.

Do Not:

- Add directly to dry cement
- Expect fast setting like accelerators
- Use as a substitute for curing or moisture control

Failure Modes & Corrective Action

Symptom	Likely Cause	Corrective Action
No strength improvement	**Underdosage**	**Increase dosage within limits**
Sticky or wet blocks	**Excess water**	**Reduce water by 3–5%**
Edge cracking	**Poor compaction**	**Improve vibration / pressing**

Compatibility Notes (Precast Reality)

- **Cement:** OPC 43 & 53 grade, PPC
- **Flyash:** Fully compatible
- **CLC Systems:** Compatible (trial required for foam stability)
- **Pigments:** Compatible; shade trials recommended
- **Other Admixtures:**
  - Can be combined with Skycast-A for finish improvement
  - Avoid combining with high-dose premium accelerators
- **Steam / Accelerated Curing:** Generally not required

Typical Technical Properties

Property	Value
Appearance	Light coloured liquid
Density	~1.00 – 1.05 kg/L
pH	Neutral to mildly alkaline
Chloride Content	Controlled within limits
Alkali Content	Moderate

Trial Protocol

Minimum 10 consecutive production batches

- Record:
  - Block density
  - Compressive strength (if tested)
  - Breakage during handling
  - Visual uniformity
- Accept only if **strength consistency and breakage improve**

Storage and Shelf Life

- Store indoors, protected from sunlight and frost
- Recommended storage temperature: above +5 °C
- Shelf life: **12 months** in sealed containers

Disclaimer

The information in this sheet is provided for general guidance and is based on current knowledge and experience. Due to the variety of possible application methods and site conditions, no responsibility is assumed for results obtained under specific circumstances.

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