



Technical Data Sheet

JC-DRY-CON

Pre-Blended Dry Mix Concrete

1. PRODUCT DESCRIPTION

Jenga® JC-DRY-CON Series is a factory dried material, sieve controlled, pre-blended dry mix concrete formulated from OPC 32.5N cement, sieve-graded aggregates and performance admixtures, proportioned under controlled factory conditions to a fixed cement ratio. Because all constituent materials are pre-dried and pre-batched to specification before bagging, on-site preparation is reduced to a single step: just add water and mix. This eliminates manual batching errors and site-to-site variability, and delivers consistent, specification-compliant concrete without the need for on-site aggregate stockpiles, weigh-batching equipment, or manual proportioning.

2. COMPOSITION

Constituent	Specification
Binder	Ordinary Portland Cement (OPC) 32.5N
Aggregate	Sieve-controlled graded aggregate, maximum nominal size 10 mm
Admixtures	Factory-dosed performance admixtures for workability and strength development
Moisture condition	Factory dried material; moisture content controlled prior to bagging

3. AREAS OF APPLICATION

- Foundations, footings and RCC/PCC works
- Columns, beams and slabs
- Pavements and hardstanding
- Repair works
- Boundary walls and sidewalks
- General construction requiring consistent, ready-to-use concrete

4. KEY FEATURES

- Factory blended and sieve controlled for consistent particle size distribution
- Factory dried material — no on-site drying or moisture correction required
- Just add water — no separate batching of cement, sand or aggregate on site
- Fixed, quality-controlled cement ratio in every bag
- Consistent compressive and flexural strength development
- Reduced material wastage and site handling
- Easy storage and transportation in sealed bags

5. TECHNICAL / PHYSICAL PROPERTIES

Property	JC-DMC-20	JC-DMC-25	JC-DMC-30	Test Reference
Compressive strength, 28-day	≥ 20 MPa	≥ 25 MPa	≥ 30 MPa	IS 516 / ASTM C39
Flexural strength, 28-day	≥ 3.5 MPa	≥ 4.0 MPa	≥ 4.5 MPa	IS 516 / ASTM C78
Water-cement ratio (indicative)	0.50–0.55	0.48–0.52	0.45–0.50	—
Maximum aggregate size	10 mm	10 mm	10 mm	IS 383
Initial setting time	~2 h	~2 h	~2 h	IS 4031
Final setting time	8–10 h	8–10 h	8–10 h	IS 4031

Values are typical results obtained under standard laboratory curing conditions and are provided for reference. Actual on-site performance may vary with ambient temperature, curing practice and workmanship.

6. SIEVE CONTROL / AGGREGATE GRADING

Aggregate entering the blending process is sieve controlled at the factory to a continuous grading envelope, minimising oversize and undersize particles that would otherwise affect workability, compaction and long-term strength. A typical grading profile for the 10 mm nominal aggregate is given below.

IS Sieve Size	Typical % Passing
12.5 mm	100
10.0 mm	85–100
4.75 mm	40–70
2.36 mm	25–50
1.18 mm	15–35
600 µm	8–20
300 µm	2–10
150 µm	0–5

Grading envelope conforms to IS 383 requirements for graded aggregate of 10 mm nominal size; batch-specific certificates are available on request.

7. MIX PROPORTION / CEMENT RATIO

Each grade is factory-proportioned to a fixed cement ratio, giving the approximate on-site equivalent mix proportions (cement : fine aggregate : coarse aggregate, by weight) shown below.

Grade	Approx. Mix Ratio	Cement Content	Grade Designation
JC-DMC-20	1 : 2.5 : 3.5	~ 300 kg/m ³	M20
JC-DMC-25	1 : 2.0 : 3.0	~ 330 kg/m ³	M25
JC-DMC-30	1 : 1.5 : 2.5	~ 360 kg/m ³	M30



Cement ratio and mix proportions are fixed and controlled during factory blending; figures above are indicative equivalents for engineering reference and are not adjustable on site.

8. PACK SIZE

50 kg moisture-resistant, laminated bag.

9. WATER REQUIREMENT

Approximately 4.5–5.0 litres of clean, potable water per 50 kg bag. Since the material is a factory dried, sieve-controlled blend, water is the only variable to be added on site — just add water and mix; do not adjust the cement ratio by adding extra cement or aggregate.

10. COVERAGE / YIELD

One 50 kg bag yields approximately 22–23 litres (0.022–0.023 m³) of fresh, compacted concrete.

11. MIXING

Mix mechanically (pan or drum mixer) or by hand for 3–5 minutes until a homogeneous, uniform-colour mix is obtained. Add water gradually and do not exceed the recommended water requirement, as excess water increases the effective water–cement ratio and reduces both compressive and flexural strength.

12. APPLICATION

Place immediately after mixing. Compact thoroughly to eliminate entrapped air and finish to the required surface tolerance.

13. CURING

Keep continuously moist for a minimum of 7 days, preferably 14 days, to achieve the design compressive and flexural strength.

14. STORAGE & SHELF LIFE

Store dry, off the ground, in unopened bags away from moisture. Shelf life: 12 months from date of manufacture when stored as recommended.

15. HEALTH & SAFETY PRECAUTIONS

Wear gloves, safety goggles and a dust mask when handling. Avoid contact with eyes and skin; in case of contact, rinse thoroughly with clean water. Refer to the Safety Data Sheet (SDS) for full handling and first-aid information.

16. DISCLAIMER

The information in this Technical Data Sheet is given in good faith, based on Jenga®'s current knowledge and testing, and may be updated without prior notice. As on-site conditions are outside our control, users should confirm suitability for their specific application, including independent testing where required.