RAMCO HARD WORKER

ECO PLASTER HW305

Self-Curing Plaster Without Sand

TECHNICAL DATA SHEET

Product Description

Hard Worker Eco Plaster HW305 is a self-curing plaster without sand variant, for internal and external wall applications. It is designed to provide excellent water retention, workability, and finish when combined with quality sand at site. The formulation eliminates the need for external curing and enables application up to 15 mm thickness in a single coat - delivering durable plastering with reduced material loss and rebound.

Features

- Self-curing: no external water curing required
- High water retention for consistent and crack-free finish
- Smooth workability with excellent sag resistance
- Reduced rebound and material wastage
- Lower water permeability (approximately 50% lower than conventional plaster)
- Up to 15mm application in a single coat

Application Areas

Recommended for plastering over mineral substrates such as:

- Red bricks
- AAC blocks
- Fly ash bricks
- Hollow blocks
- Concrete blocks
- Laterite blocks

Designed for use in internal and external plastering. Not suitable for load- bearing, structural, or brick-laying applications.

Eco Plaster HW305 is compatible with Integral Waterproofing HW101 for enhanced water resistance in plaster applications. The required dosage may vary based on mix proportions and site conditions.

Surface Preparation

The substrate shall be sound, clean, and free from dust, oil, grease, loose particles, shuttering oil and curing compounds or any contaminant that may affect bond.

All weak or friable material shall be removed prior to application. The surface shall be pre-wetted with clean water to achieve a Saturated Surface Dry (SSD) condition before plastering. Application shall not be carried out on water-logged or excessively dusty surfaces. For very smooth and dense substrates such as cast in-situ concrete walls and Mivan shuttered concrete surfaces, the surface shall be mechanically hacked or roughened prior to plaster application.

Mixing Instructions

Eco Plaster HW305 shall be mixed with well-graded sand conforming to IS 1542 – Zone II (M-sand, river sand, or P-sand). The mixing ratio shall be maintained based on application requirements, with 1:3 recommended for ceiling plaster, 1:4 for internal and external plaster. For edges, corners, use a richer mix of 1:1 to 1:2 is recommended to ensure better strength and build-up.

Grading of Sand for Internal Wall or External Wall or Ceiling Plaster (Clause 5.1) of IS 1542:1991

IS Sieve Designation (IS 460:1985)	Percentage Passing (%)
10 mm	100
4.75 mm	95 – 100
2.36 mm	95 – 100
1.18 mm	90 – 100
600 micron	80 – 100
300 micron	20 – 65
150 micron	0 – 15

Note:
For crushed stone sands and crushed gravel sands, the permissible limit on **150 micron IS sieve** is increased to **20%**. This does not affect the **5% allowance permitted in Clause 5.1**.

Clean water shall be added, and the material should be mixed for a maximum of 5 minutes until a smooth and uniform mortar is achieved. Do not remix or use hardened material.

Application Instructions

Eco Plaster HW305 shall be made into slurry and applied as first cost after hacking. The mixed mortar shall then be applied manually using a trowel in a single coat up to 15 mm thickness. For thickness greater than 15 mm, application shall be carried out in multiple layers, allowing the initial layer to firm up before subsequent application. The surface shall be levelled and finished as required using suitable tools. Putty application may commence after 10 days of plastering. As the product is self-curing, no external water curing is required.

Curing

Eco Plaster HW305 is a self-curing plaster formulated with special chemical additives that retain moisture within the matrix to ensure proper hydration. No external water curing is required after application.

Physical Parameters

Property	Typical Result
Colour	Grey
Mix Ratio	1:1 or 1:2 for corner and edges 1:3 for ceiling with hacking 1:4 for internal & external applications

Performance Parameters

Property	Typical Result
Water Retention	65 – 75%
Pot Life	60 minutes at 27°C
Air Content (IS 1199 Part 4:2018)	6.5 – 8 %
Water Permeability (IS 2645)	0.96×10^{-7} cm/s
Bond Strength @ 28 Days (IS15477)	0.59 – 0.61 MPa
Flexural strength @ 28 Days (IS 4031 Part 8)	1.7 – 1.9 MPa
Water absorption (%) @ 1Hr (LDM)	10 – 12 ml

All values tested under standard laboratory conditions.

Package

Eco Plaster HW305 is available in 25 kg and 50 kg.

Coverage

1 bag of Eco Plaster HW305 gives a coverage of 45 – 50 Sqft at 12 mm thickness for 1:4 mix ratio by volume.

Storage

The product has a shelf life of 3 months from the date of manufacture when stored in sealed condition in a

dry area protected from moisture and direct sunlight. Bags shall be stacked off the ground and protected from damp conditions.

Precautions

Product is non-hazardous, however it is cementitious. Use gloves, mask, and goggles during handling. Avoid eye contact. In case of contact, rinse with clean water and seek medical advice if irritation persists.

Health and Safety

Eco Plaster HW305 is cementitious in nature and should be handled with appropriate care. Use gloves, protective mask, and goggles during handling and mixing. Avoid contact with eyes and prolonged skin contact. In case of eye contact, rinse immediately with clean water and seek medical advice if irritation persists.

Technical Support

All values provided are tested under controlled laboratory conditions; performance may vary depending on site conditions and workmanship. For site-specific recommendations, technical data, or detailed guidance, contact the Hard Worker Technical Services Team at:

Toll-free number 1800 202 5700

Email customercare@ramcocements.co.in

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