RAMCO HARD WORKER

INTEGRAL WATERPROOFING HW101

Integral liquid waterproofing admixture for concrete and mortar

TECHNICAL DATA SHEET

Product Description

Hard Worker Integral Waterproofing HW101 is an integral liquid waterproofing admixture engineered to enhance the durability and water-tightness of concrete and cement mortar. Formulated for instant and uniform dispersion throughout the mix, it blocks the capillary pore network and reduces permeability and water absorption, producing a dense, homogeneous matrix within the concrete mass. By optimising the water- cement ratio, HW101 improves cohesion and workability at a reduced water demand and enhances compressive strength, extending structural service life and resisting corrosion of embedded reinforcement from within.

HW101 disperses completely through the mix to deliver uniform waterproofing throughout the concrete matrix and is compatible with all types of Portland cement. It is intended solely for integral use within fresh concrete, screed and plaster mixes, and is not a surface-applied waterproof coating.

Standard Compliance

Conforms to IS 2645:2003 - Integral waterproofing compound for cement mortar and concrete.

Features

- Improves workability and cohesion at reduced water demand
- Reduces permeability and water absorption
- Optimises the water- cement ratio
- Boosts compressive strength
- Instant, uniform dispersion throughout the mix
- Compatible with all types of cement

Application Areas

Recommended for all RCC and cement mortar structures where internal waterproofing is essential:

- Foundations
- Columns and beams
- Roof slabs

Also suitable for use in fresh concrete mixes, screed mortar and plastering. HW101 is not suitable for surface waterproof-coating applications.

Directions for Use

Batch the cement, sand and aggregate into the mixer in accordance with the approved mix design and blend in the dry state. Add approximately 70% of the required gauging water and mix until the blend is uniformly moist. Introduce HW101 into the gauging water at up to 200 ml per 50 kg bag of cement - do not add it to the dry cement–aggregate blend. Add the balance of the water to achieve the required consistency and mix thoroughly for 2-3 minutes until the mix is homogeneous. Use the mix immediately for placing. Ensure all materials are clean and accurately batched, and avoid contaminated or segregated aggregates.

Recommended Dosage

Up to 200 ml per 50 kg bag of cement. The dosage should be adjusted for the cement type, the specific site mix design and performance requirements, and confirmed by site batch trials.

Technical Properties

Property	Value
Appearance	Free-flowing liquid
Colour	Transparent
Specific Gravity	1.0 – 1.1
Total Solids	25 – 30%
Water Reduction	8 – 10%

Performance Properties (as per IS 2645:2003)

Property	Value
Chloride Content	< 2%
Water Permeability	Reduced permeability
Workability	Increased cohesion at lower w/c ratio
Compressive Strength	Increases by 10 – 20%

All values tested under standard laboratory conditions.

Package

Available in 1 L, 5 L, 10 L, 20 L, 50 L and 200 L packs.

Shelf Life

Shelf life of 24 months from the date of manufacture in unopened, sealed containers stored between +10°C and +50°C in dry conditions. Protect from direct sunlight and frost.

Precautions and Safety

HW101 is non-hazardous and non-flammable. Use gloves, goggles and standard protective equipment during handling. In case of eye contact, rinse immediately with clean water and seek medical attention if required. Keep out of reach of children.

Important Note

HW101 is not a surface-applied waterproof coating. It is intended only for integral use within concrete, screed and mortar.

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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