HYDACON
Innovative chemical solutions

Technical Data Sheet

# HYDASCREED 400

Standard Screed

## ABOUT HYDASCREED 400

**HYDASCREED 400** is a polymer-modified, engineered cement concentrate developed for creating high-strength, self-curing floor levelling screeds. Designed for both interior and exterior applications, it is ideal for preparing robust underlays where excellent performance and durability are essential.

Formulated to offer non-shrink and shock-resistant performance, **HYDASCREED 400** simplifies on-site application by eliminating the need for additional curing methods. When mixed with fine aggregates in a 1:4 ratio by volume and water, it forms a consistent and reliable base layer for flooring systems.

**HYDASCREED 400** complies with **EN 13813 - 2002** standards, ensuring it meets strict European quality benchmarks for floor screeds.

## SURFACE APPLICATION MATERIALS

- Concrete
- Cement mortar beds
- Cement terrazzo

## RECOMMENDED SURFACES/SUBSTRATES

- Cement-based screeds and mortar beds
- Cement-plastered or rendered surfaces
- Concrete surfaces
- Drywall panels (cement, bison, gypsum boards)
- Existing tiled or stone surfaces
- Waterproofing-treated areas(seek technical advice)
- Other cementitious substrates

## APPLICATION AREAS

- Interior and exterior floor screeds
- Residential, commercial, and industrial floors
- Podiums, terraces, balconies
- New construction and renovation projects

**PRODUCT HIGHLIGHTS**

- ❖ **HIGH STRENGTH** – Provides durable and reliable screed layers.
- ❖ **SHOCK & IMPACT RESISTANT** – Ideal for heavy-duty floor areas.
- ❖ **SELF CURING** – Eliminates the need for additional curing, simplifying application.
- ❖ **NON-SHRINK FORMULATION** – Reduces cracking and improves dimensional stability.
- ❖ **EASY TO USE** – Simplified mix design and excellent workability.

## TECHNICAL DETAILS

**EN DATA**

| PROPERTY / TEST | METHOD | REQUIREMENT | HYDASCREED 400 VALUES |
|---|---|---|---|
| Compressive Strength | EN 13892-2 | ≥ 25 N/mm² | 27 – 32 N/mm² |
| Flexural Strength | EN 13892-2 | ≥ 3 N/mm² | 5 – 7 N/mm² |
| Bond Strength | EN 13892-8 | ≥ 1.50 N/mm² | 1.02 – 1.52 N/mm² |
| BRE Drop Hammer Test | BS 8204 | 3 – 4 mm | 5 – 6 mm |
| Surface Hardness | EN 13892-6 | ≥ 40 N/mm² | 52 – 72 N/mm² |

## APPLICATION INSTRUCTIONS

**SUBSTRATE PREPARATION GUIDELINES**

1. **CLEAN & STABLE SURFACE**

   Ensure the substrate is structurally sound, clean, and free from dust, oil, grease, loose particles, curing compounds, sealers, or any contaminants. Use mechanical methods for proper surface preparation if required.

2. **EVEN & TRUE BASE**

   Surfaces should be plumb and level, with a maximum variation of 6 mm in 3 meters (¼" in 10 ft). Proper leveling ensures good screed bonding and prevents failures in the top layers or tiles.

3. **DAMPENING BEFORE APPLICATION**

   For dry and dusty concrete or masonry, slightly pre-wet the surface before screed application. Ensure no standing water remains. Installation can be done on a damp but not wet substrate.

4. **NEW CONCRETE CURING**

   Newly placed concrete must be cured for a minimum of 28 days before applying HYDASCREED 400.

5. **EXPANSION JOINTS PRESERVATION**

   Respect all substrate expansion, construction, and movement joints. Do not bridge joints with mortar or screed. Use flexible sealants or appropriate profiles.

6. **REINFORCEMENT FOR PERFORMANCE**

   For enhanced durability and crack resistance, incorporating wire mesh in the screed as per site engineer recommendation is advised.

## HOW TO MIX HYDASCREED 400

1. **MIX DESIGN (VOLUME RATIO)**

   Mix **HYDASCREED 400** with fine aggregates and water in the ratio of 1:4 by volume (1 part **HYDASCREED 400** to 4 parts fine aggregate).

2. **MIXING PROCEDURE**

   - Use clean, potable water and uniformly graded fine aggregates (max. 8 mm size).
   - Aggregates must conform to IS 383:1970 Clause 4.3 and be free of deleterious materials, silt, and dust.
   - Use a mechanical mixer for homogeneous mixing. Adjust water depending on site conditions to achieve workable consistency.

3. **PRIMING FOR ADHERED SCREEDS**

   - Prepare slurry by mixing HYDASCREED® 400 with 50% water by weight.
   - Apply this slurry using a brush or roller on the cleaned substrate ensuring full coverage.
   - Each 25 kg bag covers approx. 25 sq. m of priming area.

## PRO TIPS & PRECAUTIONS

✔ Use graded fine aggregates up to 8 mm**.**

✔ Ensure aggregates are clean and free from silt, clay, or particles finer than 75 microns.

✔ Always add powder to water, never vice versa, to prevent lumping.

✔ Mix only quantities that can be used within pot life (4 hours)**.**

✔ Avoid adding extra water or remixing after the mix starts setting.

✔ Protect freshly laid screed from drying winds, high temperatures, or direct sun.

✔ For installations above 3 meters, use mechanical supports for safety.

✔ Maintain surface temperatures between 4°C and 40°C during application.

## PRODUCT SPECIFICATIONS & STORAGE GUIDELINES

**AVAILABLE PACKAGING:** 20Kg Bag

**COLOUR:** Grey

**SHELF LIFE:**

24 months from manufacturing date if stored in original, unopened packaging.

**STORAGE CONDITIONS:**

- Store in a cool, dry area (between 10°C–30°C)
- Avoid exposure to moisture, direct sunlight, or freezing temperatures.
- Discard if packaging is damaged or if material has hardened or clumped.

**COVERAGE DETAILS** (Per 25 mm thickness by Volume)

- **Mix Ratio 1:3 (HYDASCREED 400 : Aggregates)**

  – Aggregates: 100 Kg

  – Coverage: 30 Sft
- **Mix Ratio 1:4 (HYDASCREED 400 : Aggregates)**

  – Aggregates: 125 Kg

  – Coverage: 36 Sft
- **Mix Ratio 1:5 (HYDASCREED 400 : Aggregates)**

  – Aggregates: 150 Kg

  – Coverage: 43 Sft
- **Mix Ratio 1:6 (HYDASCREED 400 : Aggregates)**

  – Aggregates: 190 Kg

  – Coverage: 50 Sft

## SAFETY & APPLICATION GUIDELINES – HYDASCREED 400

### 1. PERSONAL PROTECTION

- Always wear gloves, safety goggles, and protective clothing during handling and mixing.
- Keep out of reach of children. For professional use only.

### 2. EMERGENCY PROCEDURES

- Skin Contact: Wash immediately with clean water.
- Eye Contact: Rinse eyes thoroughly with water for at least 15 minutes and seek medical attention if irritation persists.

### 3. MIXING GUIDELINES

- Mix HYDASCREED 400 with clean, graded fine in the ratio of 1:4 by volume.
- Gradually add powder into clean water. Never add water to the powder.

- Adjust water content depending on site conditions to achieve workable consistency.
- Do not add foreign materials or exceed recommended water ratio.

**4. SURFACE PREPARATION**

- All substrates should be structurally sound, clean, and free from dust, grease, paint, or curing compounds.
- Substrate temperature should be between 4°C and 40°C.
- Dampen dry surfaces before application; avoid water stagnation.
- For adhered screeds, apply a cementitious slurry primer (made by mixing HYDASCREED 400 with water in 1:0.5 ratio by weight).
- Apply primer with a brush or roller and proceed while still wet and tacky.

**5. INSTALLATION & PROTECTION**

- Place the screed over the wet slurry bond coat. Compact and level the material to the desired thickness.
- Maintain uniform aggregate grain size up to 8 mm.
- Use wire mesh reinforcement where specified.
- Provide expansion joints as per international standards or project specifications.
- Allow screed to air cure for 3 days before tiling when using thin set adhesive.
- Protect the freshly laid screed from rain, extreme sun, and traffic for at least 24 hours.

**PERFORMANCE LIMITATIONS**

- Not to be used as a self-leveling or finishing screed.
- Ensure proper curing, especially in hot or windy conditions.
- Application in extreme temperatures may affect performance.
- Always conduct a patch test in site conditions where substrate quality is unknown.
- Final coverage may vary depending on site-specific aggregate bulk density and application method.

**-End of TDS**