

NuCoteTM Structural Screed HS

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

NuCote Structural Screed HS is a one component, fiber reinforced, fast setting and high strength concrete slab reinstatement mortar. It is supplied as a ready to use blend of dry powders that only require the addition of clean water. It produces a good consistent, shrink compensated, polymer modified cementitious repair mortar that will set faster than traditional cement mortars. Once mixed, applied, and cured following good concrete cure practices it provides a finished product with good resistance to sulphate attack, carbonation, chloride ingress and freeze/thaw.

ADVANTAGES

- Single component
- Simple to mix and apply.
- Excellent adhesion to concrete.
- Shrinkage compensated.
- Excellent freeze/thaw resistance.
- Extends life of concrete and repairs.
- Fast return to service.
- Low permeability

APPLICATION AREAS

- Structural repairs to concrete.
- Marine structures
- Parking garages
- Tunnels, dams, and bridges
- Floors, walls and columns
- Decks and slabs
- Water and wastewater structures.

TECHNICAL DATA

DESCRIPTION	RESULTS
Compressive Strength ASTM C109	70 Mpa (28 Days)
Flexural Strength ASTM C580	10 Mpa (28 Days)

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The above results are based on water content of 2.8 litres per 25 Kg bag (water/powder ration of 0.11). Results are affected by product storage conditions, temperature, water content, curing regime, sample quality, compaction method and equipment used to prepare samples and conduct test.

PACKAGING

NuCote Structural Screed HS is available in 25 kg bags. Water addition is 2.8 - 3 litres.

Yield

Approximately 12 Litres per bag.

STORAGE AND STABILITY

NuCote Structural Screed HS has a shelf life of 12 months when stored in the original containers in a cool, dry place. Failure to do so will result in a reduction of shelf life.

SURFACE PREPARATION

NuCote issues method statements or installation guidelines for all its products that are being used in various areas of application. The method statement must be considered or referred to prior to beginning the actual work.

Concrete substrate must be structurally sound. Remove all oil, grease, paint, corrosion, dust and surface deposits. This can be done by wire brush, sand blasting or grinding. Saw cut around the edge of the repair to a minimum depth of 6 mm. Reinforcing steel should be fully exposed with enough room behind the steel to place the repair mortar.

SUBSTRATE REQUIREMENTS

When application thickness is less than 25 mm: The concrete substrates must achieve a minimum compressive strength of 25 MPa and 1.5 MPa in tensile adhesion strength. The surface must be laitance free with no dust of loose materials. The moisture content should always be monitored and be less than 5 % with no rising damp. Ensure DPM's are placed under the concrete screeds.

PRIMING

After the substrate has been prepared, ensure it is wetted with water for a minimum of 2 hours and not allowed to dry out. No priming is required if the substrate has been wetted and has achieved Saturated Surface Dry (SSD) conditions before placing the mortar.

If the substrate cannot be wetted to achieve Saturated Surface Dry (SSD) conditions, it must be primed with **NuCote MT Primer** or **NuCote GP Primer** and broadcast with **NuCote Scatter Agg 1** to improve the bonding. The mortar should be applied while the applied primer is still tacky.

MIXING

Add 2.8 litres of water per 25 kg bag of **NuCote Structural Screed HS** into a clean mixing container. Pour the desired amount of water into the mixing container for full bag mixing and mix for 3 - 5 minutes, until the mix is completely homogenous. Water level can be adjusted (2.8 – 3 litres of water per 25 kg bag) to achieve desired consistency. Use of part-bags is not recommended.

APPLICATION

The mixed material should be applied immediately after mixing is completed. Ensure thorough compaction on application around the edges and reinforcement. The application of **NuCote Structural Screed HS** is then finished by trowel. **NuCote Structural Screed HS** can be applied from a minimum thickness of 6 mm and to a maximum thickness of 10 mm for unsupported vertical applications. When formwork is used, or when application is horizontal, the maximum depth can be increased to 25 mm.

POT LIFE AND CURING

Once mixed the product has a pot life of 30 minutes. Once placed allow the product to cure in accordance with good concrete practice for about seven days.

LIMITATIONS

Do not use **NuCote Structural Screed HS** at temperatures below 15°C and temperature above 30°C. Do not expose the product to running water during application or while still in a plastic state.

CLEANING

Clean hands and skin immediately after use with tap water. Clean tools and equipment immediately after use with water.

COLOUR

Once cured the product is cement grey in colour.

SAFETY AND HANDLING

Wear a dust mask when mixing **NuCote Structural Screed HS**. Suitable gloves and eye protection should be worn at all times. Should the product come into contact with the eyes, wash immediately.

DISCLAIMER

These products are sold according to our standard terms and conditions of sale which is available on request and may not be overridden by any other legal documentation. Whilst the information contained herein is true, accurate and represents our best knowledge, the user must contact **NuCote** immediately should any complications occur. Site conditions, labour and application issues are out of our control and the contractor holds this liability. Figures for consumption are estimates and theoretical and do not allow for wastage, surface profiles that are not up to standard, porosity, variations in levels etc.

HEALTH AND SAFETY INFORMATION

In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice. If inhaled move to fresh air. Consult a physician after significant exposure. If swallowed, clean mouth with water and drink plenty of water afterwards. Do not induce vomiting without medical advice. In case of skin contact, take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician when in contact with existing open wounds.

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent **Material Safety Data Sheet** containing physical, ecological, toxicological, and other safety-related data.

The Material Safety Data applicable to the handling of cement based raw materials should be read, understood, and rigidly adhered to. These are available on request from NuCote.

AUTHORISED TECHNICAL PERSONNEL

Please note that only **NuCote** Authorised Technical Personnel are permitted to change any information in this datasheet or provide recommendations concerning the use of this product. Visit www.nucote.co.za for a current datasheet and materials safety datasheet.

DATASHEET VALIDITY

NuCote makes modifications to its datasheets from time to time when needs arise. Please check the current datasheet on www.nucote.co.za to ensure you use the latest version.

WARRANTIES

NuCote supplies products that comply with the properties as shown on the current product datasheets. **NuCote Structural Screed HS** is guaranteed to be free of any manufacturing defects. In the event that products supplied are proved not to comply with these properties, then **NuCote** will replace the non-complaint product or refund the purchase price. Any suspected defects must be reported to **NuCote** in writing within five working days of being detected.

NuCote does not warrant or guarantee the installation of the products as it does not have control of the installation or end use of the products. If **NuCote Structural Screed HS** is applied in accordance with the appropriate method statement issued for the specific project, by an approved applicator, and the substrate complies with the minimum substrate requirements and contact slabs have damp proof membranes and good drainage installed prior to the casting of the concrete screed, then the system is to last for the life of the sealer or topcoat applied over it.

We discourage placing **NuCote Structural Screed HS** on slabs with a substandard substrate in terms of compressive and tensile adhesion strength, or badly prepared substrate.

NuCote makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other representations, warranties, agreements, promises or commitment expressed or implied. **NuCote** shall not be liable for damages of any kind with respect to purchases or use of **NuCote Structural Screed HS**, including remote or consequential damages, down time, delays, and application failures.

In accordance with ISO 9001:2015 and the Occupational Health and Safety Act (Act 85 of 1993), herewith Product and Safety Data Sheet.	
We hereby confirm that we have received a Product and Safety Data Sheet for NuCote™ Structural Screed HS system and are returning the obsolete copies.	
COMPANY NAME:	
SIGNATURE:	
NAME:	
DATE:	

CAUTION

The information contained in this bulletin is to the best of our knowledge true and accurate but any recommendations or suggestions, which may be made, are without guarantee since the conditions of use are beyond our control. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.