

Nufix SBR

Bonding & Waterproofing Additive

Description

Nufix SBR is a styrene butadiene rubber latex designed to upgrade the bonding and waterproofing properties of cementitious renders, screeds, mortars and concretes. By increasing durability and tensile/flexural strengths, high strength screeds may be laid as thin as 10 mm. In addition, screeds and renders can be waterproofed, thus greatly improving their resistance to abrasion, frost, water vapour transmission and chemical attack. The improvements in physical properties inhibited by Nufix SBR is superior to those obtained using other modifying agents. In addition, Nufix SBR will not saponify even in wet conditions. In certain applications Nufix SBR provides a simple, easy to use and cost saving alternative to epoxy and polyester resin based systems.

Advantages

- Easy to use
- Greatly improves adhesion to substrate
- Waterproofing cementitious systems
- Reduces shrinkage cracking
- Typical Compressive Strengths of 35-45MPa can be achieved

Applications

- Water resistant renders & screeds
- Bonding new concrete to old
- Chemical & abrasion resistant screeds, ideal for agricultural & industrial situations
- Repair & patching of concrete floors
- Concrete repair mortar when gauged with sand & cement
- Production of water resistant adhesives for brick slips, tiles, artificial stone, kerbs, copings, etc.
- Lining for effluent tanks & ducts etc.

Technical Information

Polymer type	Styrene Butadiene Latex
Solids content	48 %
Standard gravity	1.01
Viscosity	35 centipoise
pH	10.5

Surface Preparation

All surfaces must be clean and structurally sound. Oil, grease other contaminants and loose particles must be removed. For best results the surface of the concrete should be mechanically scarified or scabbled, although other methods such as grit-blasting may be employed.

To ensure temperature and porosity of the concrete substrate is controlled, it is necessary saturate with clean water for one hour prior to application and maintain to damp surfaces.

Priming:

Nufix SBR gauging liquid can be easily used to make a slurry primer using the following steps:

1. Dilute the Nufix SBR gauging liquid with water at a ratio of 3:1
2. Mechanically mix the diluted Nufix SBR gauging liquid with 2 parts OPC until a smooth paste is formed.

After removing all free free-standing water, the primer can then be applied to the surface using a stiff brush or broom.

NOTE: It is essential that the subsequent topping is applied whilst the primer remains tacky. If the primer is allowed to dry out then it must be fully removed and surface wet-down and re-primed using the same procedure.

Mixed Slurry Primer coverage: 2.5-3.5 m² per litre

N.B. It is essential that prior to the application of any topping containing Nufix SBR the above procedure is carried out.



Mix Design:

Aggregates should be washed sharp sand and be free of excessive fines. As Nufix SBR acts as a plasticiser, workability is increased and there is a slight retardation of setting time. In cold weather or where a faster set is required, then a rapid hardening Portland cement is recommended. Do not use other admixtures or cements without reference to the manufacturer. Mixes which incorporate Nufix SBR are slightly darker in colour than ordinary mortar mixes.

Mixing

Mixing procedures are like those typically undertaken for normal concrete or mortar except that Nufix SBR partially replaces the gauging water.

Normal curing procedures should be employed immediately.

General Purpose Mortar/Screed

For the majority of applications the following mortar mix design formula can be used as a render or screed after the surface has been prepared and primed as previously described.

Raw material	Amount
OPC	50kg
Washed sharp sand (zone 2)	150kg
Nufix SBR	9 Litres
Water	9 Litres
0.1m ³	Yield

Thickness will be dependant on application but 13mm is average.

On vertical surfaces this should be built up in two applications, normally leaving 5 hours time between applications (although the time will be dependent on temperature).

Where more than one build up application is applied, ensure that the intermediate top surfaces are heavily hatched to provide a mechanical key.

If the surface dries out completely then it should be re-primed.

Internal and External Waterproof Renders

Surface preparation is as previously described.

Two priming sealer coats should be applied, ideally at right angles to each other. The second coat should be applied immediately after the first coat has dried, approximately 30 minutes.

Internal and External Waterproof Renders (continued)

Thickness of each sealing coat should not exceed 1.5 mm or crazing may occur.

Allow the two priming sealer coats to dry out completely for a minimum of 48 hours, after which time the surface is again primed and the general purpose mortar applied while the primer is still tacky.

Minimum thickness 13mm, built up in two applications in 5 hours.

Where more than one build up application is applied, ensure that the intermediate top surfaces are heavily hatched to provide a mechanical key.

If the surface dries out completely then it should be re-primed.

Heavy Duty Floor Screed

Minimum thickness: 20mm

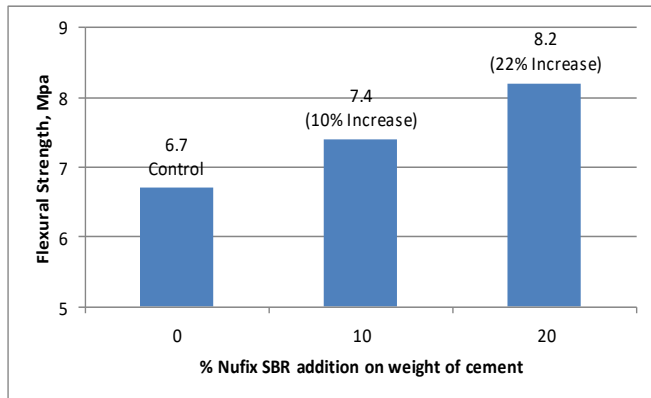
Yield: 0.1m³

50kg	OPC
87.5kg	3-5mm Granite Chips
87.5kg	Washed sharp sand (zone2)
10 Litres	Nufix SBR
6 Litres	Water

For screed depths over 25mm, the amount of Nufix SBR addition may be reduced to 6 litres and the water adjusted accordingly.

Where special applications are involved, consult Nufins Technical Department for advice.

Flexural Strength Improvement



Chemical Resistance of

Nufix SBR Renders & Screeds

10% Potassium Hydroxide	Good
10% Magnesium Sulphate	Good
5% Lactic Acid	Good
10% Sucrose Solution	Good
Silagic Acid	Good
Urine	Good
Blood & Animal Waste	Good
20% Ammonium Nitrate	Fair
10% Sodium Hydroxide	Fair
5% Hydrochloric Acid	Fair
10% Calcium Chloride	Poor
Petroleum Spirit	Poor
Organic Solvents	Poor

Packaging

Nufix SBR is available in 5 litre, 25 litre and 200 litre units.

Storage

The shelf life is 6 months when stored unopened in dry, normal conditions and away from direct sunlight. Protect from frost.

Health & Safety

Product Safety Data Sheets (SDS) are available from Nufins. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

Limitations

Do not use in temperature below 5°C unless measures have been taken to protect materials in storage, during application and post application.

Disclaimer

The information contained herein is to the best of our knowledge true and accurate and is given in good faith but without warranty. The user will be deemed to have satisfied themselves independently as to the suitability of our products for their own particular purpose. In no event shall Nufins be liable for consequential or incidental damages.

Users must always refer to the most recent issue of the Technical Datasheets, copies of which will be supplied on request.

Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical contacts are available to provide further information and arrange demonstrations.