

WATER BASED, SURFACE RETARDER FOR CONCRETE AND MORTAR**Description**

NIROSET SR is a medium viscosity, liquid retarder used for achieving an exposed aggregate finish on concrete by retarding the setting of cement paste in the surface matrix of concrete and then removing it. The surface retarder is applied on the formwork or sprayed on the freshly poured concrete surfaces to effect retardation of the cementitious paste in the top surface layer.

Uses

NIROSET SR is recommended for all concrete where it is desired to obtain an exposed aggregate finish or a keyed surface for a superior bond with subsequently placed concrete or mortar layer. The variable depth of retardation allows considerable flexibility to architects in using different shapes and sizes of aggregate to produce attractive patterns of exposed aggregates on cast in-situ or precast panels.
It can also be used to eliminate cold joints.

Advantages

- ✓ Economical in application
- ✓ Simply applied, straight from the container.
- ✓ Need not use a mould release agent
- ✓ Good results with heat curing and high temperature concreting.
- ✓ Can be used on steel, glass fiber or timber formwork.
- ✓ Non-toxic and non-flammable

Standard Compliance

NIROSET SR complies with BS 5075 Part 1 and with ASTM C494 as Type B and Type D.

Mechanism

As concrete cures, NIROSET SR temporarily halts the set of the concrete at the surface. Controlled penetration delays the set of the surface only and allows the mass of concrete underneath to harden normally. The next day, the retarded surface concrete is brushed or washed away exposing the aggregates

Standard Compliance

NIROSET SR complies with BS 5075 Part 1 and with ASTM C494 as Type B.

Characteristics

Form	Liquid
Colour	: Colourless to Bluish
Relative Density	: 1.17 ± 0.02 at 25°C
pH	: >6
Chloride ion content	: Nil (As per BS 5075 Part I)

Directions for use**1. Formed Concrete****Surface Preparation:**

Form must be clean, dry and non-porous. Seal porous forms of wood or concrete with PU based form sealer. Ensure that the surface of formwork is clean and free from oil, grease, mould releasing agents, water, cement or other loosely adhering materials.

Mixing : Use NIROSET SR as supplied after stirring thoroughly.

Application : Any form surfaces which will not receive surface retarder should be coated with a form release agent such as NIROMOULD. Apply NIROSET SR at the recommended rate of application (see Dosage) by brush on the inner surfaces of the formwork at least an hour before the placing of concrete.

Strike off formwork within 48 hours of placing concrete and then immediately hose down the treated surface with medium water pressure to wash away the unset cement paste in the surface matrix. Brush away all the loosely adhering materials.

To bring out the full colour of the aggregate for decorative finishes, the concrete face shall be washed with diluted NIROVER MP, multipurpose cleaning agent.

2. Exposed Concrete / Flat-works**Surface Preparation:**

Pour concrete and screed, float or trowel level. For a denser and more uniform face, sprinkle extra aggregates on to surface and work in with trowel or roller, making sure the aggregates are flush with the surface and surrounded by cement paste. Do not overwork the surface with a steel trowel as this tends to seal the top surface, thus restricting the penetration of the NIROSET SR.

Mixing : Use NIROSET SR as supplied after stirring thoroughly.

Application : As soon as surface water has disappeared (normally within 30 minutes), spray/ brush NIROSET SR at the recommended rate of application (see Dosage). Under normal conditions, after the concrete has set overnight, direct a jet of water from a garden hose over the surface while scrubbing with a coarse brush to remove the retarded concrete paste. To bring out the full colour of the aggregate for decorative finishes, the concrete face shall be washed with dilute NIROVER MP, multipurpose cleaning agent.

Note :

It is recommended that field trials be conducted at different coverage rates on the design concrete mix with site raw materials, to determine the optimum depths of penetration. With high alumina and rapid hardening cements the concrete should be deshuttered within 6-8 hours.

Dosage

The rate of application depends upon the depth of retardation desired. NIROSET SR applied @ 10-12 m² /litre typically results in a depth of retardation of up to 8 mm. Greater depths of retardation are possible @ 6-8m² /litre.

Technical support

NIRMAN CHEMICALS provides technical advisory services for on-site assistance and guidance on mix design, optimum dosage evaluation of trials.

Packaging

NIROSET SR is supplied in 20 kg, 225 kg drums or in bulk on request.

Fire

NIROSET SR is water based and non-flammable.

Cleaning of Tools

Clean all tools and application equipment with water immediately

Storage and Shelf life

NIROSET SR must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature. Shelf life is 12 months when stored as above. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult our local NIRMAN CHEMICALS representative

Safety precautions

NIROSET SR does not fall into the hazard classifications. However, it should not be swallowed or allowed to come into contact with the skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with the eyes it shall be rinsed immediately with plenty of water and medical advice sought immediately. If swallowed, medical attention shall be sought immediately - Vomiting should not be induced.

Note

All Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue. Field services where provided, does not constitute supervisory responsibility, for additional information contact our local NIRMAN CHEMICALS representative.

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labor involved in the application are beyond our control.



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