



Description:

Durabond S is a modified styrene-butadiene emulsion. It is a highly water-resistant designed as an additive for concrete and mortars, used for surfacing or to restore exterior or interior concrete, masonry or stucco. **Durabond S** bonds new “WET” Portland cement-based materials to old concrete, plaster, masonry, stucco. In addition to bonding wet concrete to old, it imparts resiliency and strength to patch mixes.

Durabond S dries to a dense and resilient film. It can be grouted to bond the debonded plastering or sealing cracks.

Uses:

Durabond S can be used in many applications when added to concrete or mortar, it will improve properties of concrete and mortar ie.,

- Increase water tightness.
- Increase chemical resistance.
- Increase adhesive and flexural strengths.
- Reduce carboration up to 20 times.

Installation:

Surface Preparation:

Substrate must be clean and free from dusts, dirt, oil, wax and grease. Surface should be damp but no standing water.

Penetration of Chloride Ions.

The addition of Durabond S to mortar considerably reduces the chloride penetration, a property particularly important in steel reinforced concrete

Application of Durabond S

Application	Detail of Work	Mix Detail
Bonding Slurry	Bond new to old concrete. Pour new concrete while the slurry is still wet.	Dry Mix : Cement : Fine Sand = 1:1 Solution : Durabond S : Water = 1:1 Powder : Liquid = 2:1 Consumption : 0.2 kg/m ²
Repair Mortar	For Concrete repair e.g. honeycomb Or areas subject to heavy uses.	Dry Mix : Cement : Coarse Sand = 1:2 Solution : Durabond S : Water = 1:2 Powder : Liquid = 7:1 Consumption : 1.0 kg/m ² /cm - Thickness
Heavy Duty Floor Screed	For topping floor screed of 10-25 mm. thickness. The screed should be of a semi-dry consistency.	Dry Mix : Cement : Coarse Sand = 1:3 Solution : Durabond S : Water = 1:2 Powder : Liquid = 6:1 Consumption : 1.0-1.2 kg/m ² /cm - Thickness
Tile Adhesive	For fixing tiles, walling materials.	Dry Mix : Cement : Fine Sand = 1:2 Solution : Durabond S : Water = 1:1 Powder : Liquid = 6:1 Consumption : 0.15 kg/m ² /cm - Thickness
Chemical Resistant Concrete	For concrete used in sever environments e.g. heavy duty floor, jetty, chemical industry.	Mix Design : Min Cement = 350 kg/m ³ (Add Durabond S direct into concrete mixer) Consumption : 20 kg/100 kg. cement

Properties Improvement by Durabond S

Compressive Strength and Flexural Strength (ASTM C39)

	Days	Plain Mortar Cured in		Mortar with Durabond S cured in	
		Air	Water	Air	Water
Compressive Strength (N/mm ²)	7	32	37	45	41
	28	39	48	56	52
Flexural Strength (N/mm ²)	7	5.8	7	10	8.8
	28	6.3	9.8	12.5	11

Resistance against Chemical Attack

Acids	% Weight Loss *	
	Plain Mortar	Mortar with Durabond S
HCl, 10%	50	2
Lactic Acid, 10%	24	1
Acetic Acid, 10%	30	3

* specimens were cured for one day wet, six days dry, and subsequent tested in terms of percentage loss after 14 days immersion in the specified chemical environment.

Bonding to Substrate

Sample	Bond Strength (N/mm ²)
Plain Mortar	1
Mortar with Durabond S	2.5

General Properties

Chemical Composition	Styrene Butadiene Polymer
Appearance	Milky White
Density	1.01 – 1.02 Kg./Ltr.
Particle Size	0.21 – 0.24 Microns
Shelf Life	1 Year when unopened
Packaging	5, 25, 200 Litre / Drum

Curing :

Under normal condition, do not moist cure since air is essential in curing of polymer mixes, however under extreme conditions of wind and sun, moist curing may be required.

Resistance to Oils

Mortars modified with Durabond S have an improved resistance to oil penetration and therefore should be applied in those areas where occasional oil spill occur.

Resistance to Salt Solutions

Specimens were immersed in a 3% solution of sodium chloride for a period of 30 days and the depth of chloride ion absorption was measured.

Importance

Durabond S mortar can usually be dried by simple exposure to air. However, for large surface areas, it is necessary to protect the treated surface for 24 hours in order to prevent excessive evaporation of water. It is necessary to soak the surface with water prior to application of the Durabond S mortar.



The company provides good servicing from a team of dedicated specialists in the field. When used in accordance with its current published directions the will perform as described in this catalogue. Company will not be responsible for difficulties caused by other materials, conditions or interior workmanship. We reserve the right to determine the cause of any difficulty by our accepted test methods.

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