Optima COATINGS

DATA SHEET

WATERPROOFING

Durashield 850 HB

Optima Coatings Durashield 850 HB is apremium quality, environmentally safe, UV reflective energy saving,elastomeric, single pack roof coatingbased on high-tech polymer chemistry formulations. Based on special acrylic polymers, it is ideal for dry substrates where it forms a seamless, joint free, water and weather tight elastic membrane as a waterproof coating.

Colours:Satin White, Grey, Red, Charcoal, Silver Grey, Cream, Beigeand other custom colours volume dependant

PRODUCT USES

- To waterproof new roofs.
- Where an increased longevity and energy consumption savings of your roof is required by reducing surface temperature, maintaining flexibility and decreasing exposure to UV degradation.
- To be used in the Optima Coatings Asbestos Encapsulation System as the topcoat.
- To extend the life of older roofs.
- To re-coat an existing elastomeric coating and roofs (which may be asphalt, build-up modified bitumen, asbestos cement, terrazzo tiles and concrete) porches, patios, walkways and ramps.
- The substrate may be horizontal or inclined therefore the ideal answer for waterproofing domes and corrugated steel sheeting etc.

ADVANTAGES

- Cures to form a durable, tough, yet flexible and elastic waterproof membrane.
- Provides a uniform, seamless and jointless membrane.
- Ensures complete binding with the substrate, hence preventing water travel beneath the membrane even if it is damaged.
- Excellent durability and resistant to ageing and UV radiation.
- Reflects more than 90% of the sun's radiation. That is more than 8 times more reflective than typical gravel roof surfaces and 15 to 80% more reflective than aluminised surfaces.
- Lowers roof surface temperatures substantially, by as much as 28°C in summer.
- Reduces building cooling loads, thus saving energy and reducing electricity bills.
- Accepts foot traffic.
- Long term performance over a wide temperature range from -5°C to +80°C.
- Non-toxic and non-hazardous therefore environment and user friendly.
- Non-flammable as a liquid compound.
- Easy and convenient to apply to irregular surfaces.
- Superior elasticity and recovery properties.
- Provides an attractive, lasting reflective waterproofing surface.

PACKAGING

Optima Coatings'Durashield 850 HB is supplied in 20 kg containers and 5 kg containers on request.

SURFACE PREPARATION

Surface preparation is a very vital issue and this influences the integrity of the waterproofing system. Hence, care must be exercised when the preparation is done. This is very important when re-roofing over an existing old roof. Instructions should be followed strictly.

SURFACE PREPARATION

PREPARATION

- All surfaces to be smooth, clean, dry and free from dust, rust and laitance.

- Concrete and cementitious substrates must be well compacted with a wood float type finish, be at least 28 days old and well dried.
- Uncured concrete surface will have moisture trapped inside and will turn gaseous when temperature rises. This will lead to blistering and even delamination from the surface.
- Wooden or metal panels to be firmly fixed in position.
- Concrete or slate roof tiles: Clean and repair damaged joints. Ensure that the tiles are firmly grouted. Remove all loose material.
- Metal Roofs: Wire brush to remove moss, mildew, loose paint, and rust areas, then clean surfaces with a broom before priming.

High pressure water washing and mechanical cleaning using brooms may be used,if necessary.

APPLICATION

PRIMING

Old asphalt surfaces and bituminous roofing felt:
Cut felt blisters crosswise, dryand re-bond with suitable adhesive. Allow tocure. Then prime cleaned surface withOptima Coatings' Durashield 850 HB diluted with 20% water.

Concrete &slate tile roofs:
Following removal of all loose and other alienmaterial, prime with Durashield 850 HB dilutedwith 20% water. Greater dilution may leadto weaker bonding with the substrate.

Metal roofs:
Clean and remove all rust andapply a rust inhibitive primer. Follow this byapplying metal primer to all corrodedsurfaces.

Other roofs:
Should the roof be affected byalgae or fungal growth, use a stiff bristledbroom to remove this before treating thecleaned surface with a suitable fungicide,and apply primer coat by diluting Durashield 850 HB with 20% water

APPLICATION

Primer must be completely dry before thefirst coat is applied.
Durashield 850 HB may be applied by softbrush, roller or spray gun.
For spraying, Durashield 850 HB may beslightly diluted with water. Too great a dilutionmay lead to sedimentation and blocking of spray gun.
Apply two coats, each at the approximaterate of 0.8 kg/m² (excluding theDurashield prime coat).
Where substantial movement is anticipatedin the substructure,Opti Re-inforcing membrane (60/80 gsm thermo bonded polyester) as partof a "sandwich" membrane system is used.
Lay this mesh in the wet first coat beforeapplication of subsequent coats. All detailingto pipes, up stands, drains, projected lineetc. should be mesh reinforced in this way.

MECHANICAL PROTECTION

- **Accessible roofs.** The installed Optima Coatings' Durashield 850 HB can either be covered by insitu concrete screed or by thermal insulation. Place a non-woven polyester separation layer over the acrylic waterproofing membrane followed by appropriate thermal insulation boards. Then lay kraft paper or polyethylene sheets as separation layer over the insulation boards and place the topping screed of 4 cm to 5 cm thickness or suitable cement tiles.
- **Non-accessible roofs.** Place a non-woven polyester separation layer over the acrylic waterproofing membrane followed by the insulation boards. Cover the insulation with another layer of non-woven polyester separation layer and place 15/30 gauge washed gravel to a minimum depth of 5cm. For thicker insulation boards, the gravel depth should be at least equal to that of board thickness.

COVERAGE

- Approximately 2kg per m² for 1 mm thick dry film application
- Can vary between 1,5kg – 2kg per m2 depending on specified system for waterproofing or roof/wall coating.

IMPORTANT POINTS AND MAINTENANCE PROCEDURES

- DURASHIELD 850 HB has a 5 year product performance warranty to perform to specification for a period of 5 years from completion of the application. To extend the product warranty by an additional 5 years a maintenance coat of DURASHIELD 850 HB needs to be applied to the original coating. Proof of purchase is required to be forwarded to Optima Coatings to extend the 5 warranty
- Bitumen or asphalt roof surfaces to receive a coating of Durashield 850 HB should be totally dry. Trapped moisture can lead tosevere problems later.
- Never apply if rain is imminent.

- Application of thick coat at temperaturebelow +5°C may result in incomplete filmformation, with reduced elasticity and thepossibility of crack forming.
- Durashield 850 HB is resistant to light foottraffic. However, heavy traffic, high heelshoes, furniture, etc. will cause damage. Inthese cases the membrane should beprotected by tiles, slabs, etc.
- Do not clean the cured Durashield 850 HB coating with brooms that have hard bristles. These may cause damage.
- Do not use Durashield 850 HB on areasthat will be constantly submerged in water

CLEANING OF EQUIPMENT

- As a good roofing practice, flush all hoses, equipment and tools with water immediately after use.

SAFETY PRECAUTIONS

- Toxicity - non toxic and odourless.
- Flammability - Non flammable when wet. The cured film will burn but is not a fire hazard.
- Skin contact - Prolonged contact is to be avoided. Use of a barrier cream or gloves will protect sensitive skins.
- Cleaning - Remove with water when wet and proprietary hand cleaner when dry.
- Medical assistance - This should be sought if Durashield 850 HB is ingested or comes into contact with eyes. Eyes should be rinsed with copious amount of clean water.
- Ventilation to the working area is desirable

TECHNICAL DATA

Property Result Test Method

Solids Content, %64 (+/-1)ASTM-D-1076
Viscosity, CPS 50,000-70,000Brookfield
Density, Kg/l 1.30 (+/0.05)ASTM-D-1475-16
Application Temp, °C +5 (minimum)In-House Test
Curing Time, at 25°C Approx. 8 for touch dry In-House Test
Service Temperature °C Approx. -5 to 100 In-House Test
Tensile Strength, N/cm2 480 (4,8N/mm2)ASTM-D-412
Elongation, at Break %440 ASTM-D-412
Shore Hardness, Shore A 68 ASTM-D-2240
Permeability,Pass ASTM-E-398
Dry Peel Adhesion,lbs/sq. in. 65 ASTM-C-297
Flexibility,No cracking of film when aged over 10 years In-House Test
weathering conditions and flexed 180 degrees
UV Resistance 2000 hrs,No deterioration, no colour fade ASTM-D-822
Thermal Conductivity 0.08 N/Mk In –House Test

STORAGE

Keep away from direct sunlight and preferably store below 30°C and above +5°C.
Protect from frost.
When stored in unopened containers,expect a minimum shelf life of one year.

CURING

Allow 12-24 hours between coats. A final curing timeof 48 hours is adequate at normal workingtemperatures. Ensure curing is complete before laying thermal insulation boards, mechanicalprotect and other coverings.

Low temperatures and high atmospherichumidity will slow down the curing rate, andvice versa.

Technical details above are provided in good faith. We are an ISO 9001: 2008 registered company and our products are manufactured to the highest standards using raw materials of superior quality. Consequently we believe in the quality of our products and will willingly replace any product in the unlikely event of a quality related performance failure. Whilst we are confident in guaranteeing the quality of our products, we cannot however accept any liability for performance failure due to the incorrect application of our products. Correct application is critical to the successful performance of our products and as this process falls outside of our control we are unable to cover the application under our product performance warranty. Where there are doubts, it is recommended that the user conduct their own suitability tests before use. To retain sheen and colour consistency of your paint, always make sure that the batch numbers are the same on all paint containers that you purchase.

Updated: March 2013 (this supercedes all previous publications)