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# SYNROOF HI-BUILD

High Performance Waterproofing Membrane



Seamless

Very Flexible!

Waterproof & Heat Insulator!

Easy to apply!  
Long life!



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## GENERAL

SYNROOF HI-BUILD, an elastomeric, premium quality acrylic coating, may be applied by brush, roller, squeegee or spray equipment depending on site conditions. To spray, select a nozzle size of at least 0.028in. first checking the spray equipment to ensure suitability.

All surfaces to be coated must be clean, dry, free from dust, dirt, oil and other contaminants.

Coverage varies depending on factors such as type and quality of substrates i.e. surface regularity and application method. Apply in separate coats, each at a right angle to the one before. Using a different colour for each coat helps ensure consistency of cover. The final coating thickness to be achieved depends on the requirements of the individual roof. A final dry film thickness between 0.5 and 1.5 mm may be built-up.

## MULTIPLE APPLICATION

**Concrete Roofs**

**Metal Deck**

**Wooden Substrates**

**Terrazo Roof Tiles**

**Asbestos Roofs**

**Wet Areas**

**Exterior Walls**

## SURFACE PREPERATION GUIDELINES

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

**Concrete Roofs:** 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.

**Metal Decks:** Wire brush to remove moss, mildew, loose paint, and rust areas, then clean surfaces with a broom before priming. High pressure water brooming may be used, if necessary. Clean and Remove all rust and apply rust inhibitive Primer. Follow this by applying metal Primer to all corroded surfaces.

**Wooden Substrates:** The surface for wooden surfaces should not be glossy and smooth. The surface should be roughed by chipping the substrate.

**Terrazo Roof Tiles:** Clean and repair damaged joints. Ensure that the tiles are firmly grouted. Remove all loose material.

## PRIMING

**Old asphalt surfaces and bituminous roofing felt.** Cut felt blisters crosswise, dry and rebond with suitable adhesive. Allow to cure. Then prime cleaned surface with SYNROOF HI-BUILD diluted with 20% water.

**Concrete & Terrazo tile roofs.** Following removal of all loose and other foreign material, prime with Synroof Hi-Build diluted with 20% water. Excessive dilution may lead to weaker bonding with the substrate.

**Metal roofs.** Clean and remove all rust and apply a rust inhibitive primer. Follow this by applying metal primer to all corroded surfaces.

**Other roofs / Walls.** Should the roof / wall be affected by algae or fungal growth, use a stiff bristled broom to remove this before treating the cleaned surface with a suitable fungicide, and apply primer coat by diluting SYNROOF HI-BUILD with 20% water.

## APPLICATION

Primer must be completely dry before the first coat is applied.

SYNROOF HI-BUILD may be applied by soft brush, roller or spray gun.

For spraying, SYNROOF HI-BUILD may be slightly diluted with water. Excess dilution may lead to weaker bonds with the substrate

Apply two coats, each at the approximate rate of 0.8 kg/Sqm. (excluding the SYNROOF prime coat).

Where substantial movement is anticipated in the substructure, a mesh reinforcement (60/80 gsm thermo bonded polyester as part of a "sandwich" membrane system is used. Lay this mesh in the wet first coat before application of subsequent coats. Detailing to pipes, upstands, drains, projected line etc. should be mesh re-inforced in this way.

## CURING

Allow 24 hours between two coats. A final curing time of 48 hours is adequate at normal working temperatures. Ensure curing is complete before laying thermal insulation boards, mechanical protection and other coverings. Low temperatures and high atmospheric humidity will slow down the curing rate, and vice versa.

## MECHANICAL PROTECTION

**Accessible roofs.** The installed Synroof Hi-Build 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.



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### 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.

### PRECAUTIONS

Bitumen or asphalt roof surfaces to receive a coating of SYNROOF HI-BUILD should be totally dry. Trapped moisture can lead to severe problems later.

Application of thick coat at temperature below +5°C may result in incomplete film formation, with reduced elasticity and the possibility of crack formation.

SYNROOF HI-BUILD is resistant to light foot traffic.

However, heavy traffic, high heel shoes, furniture, etc. will cause damage. In these cases, the membrane should be protected by tiles, slabs, etc.

Do not clean the cured SYNROOF HI-BUILD coating with brooms that have hard bristles, they may cause damage.

Do not use SYNROOF HI-BUILD on areas that will be constantly submerged in water.

### PACKING

20 kg metal pails and 240 Kg Drums.

### STORAGE

Keep away from direct sunlight and preferably store below 30°C and above +5°C.

Protect from frost.

When stored in proper ventilated storage area, expect a minimum shelf life of one year.

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	Property	Typical Value	Test Method
1.	Solid Contents	64 ± 1%	ASTM D 1076
2.	Viscosity at 25°C	50,000 to 70,000 CPS	Brookfield
3.	PH	9 ± 1	In-House Test
4.	Density,	1.30 ± 0.05 Kg/Lit	ASTM D 1475 16
5.	Application Temp.	+5 (Minimum)	In-House Test
6.	Curing Time @25°C	Approx. 8 Hr. for touch Dry	In-House Test
7.	Service Temperature °C	Approx. +5 °C to 100 °C	In-House Test
8.	Tensile Strength N/cm <sup>2</sup>	480	ASTM D 412
9.	Elongation at Break %	440	ASTM D 412
10.	Hardness Shore A	68	ASTM D 2240
11.	Permeability	Pass	ASTM E 398
12.	Dry Peel Adhesion, lbs/ Sq.in	65	ASTM C 297
13.	Flexibility	No cracking of film after 1000 hrs. accelerated weathering conditions and flexed 180 degrees	In House Test
14.	UV Resistance	2000 Hrs. No Deterioration, No color fade	ASTM D 822
15.	Colors	Satin White and Grey	
16.	Coverage	For 1 mm thick dry Film use up to 1.80 kg/m <sup>2</sup>	

\* Incorporation of a Reinforcement considerably increase certain dry film properties.

The Information given on this Technical Data Sheet reflects typical median properties based on laboratory test and practical experience subject to the tolerance levels of UEAtc Directives. However, as the product is often used under conditions beyond our control, we cannot warrant anything but the product itself.

THIS PUBLICATION AUTOMATICALLY SUPERSEDES ALL PREVIOUS PUBLICATIONS RELATING TO THIS PRODUCT.

The Power to Perform

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# MATERIAL SAFETY DATA SHEET (SYNROOF HB)



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## 1. Product and Company Identification

Product Brand Name : Synroof Hi-Build  
Product Description : White liquid acrylic coating  
Use : Waterproofing  
CASName/Number : N/A  
Manufacturer Details  
Company Name : BITUMAT CO. LTD.  
Telephone : +966 13 8121210 / 8121213  
Telefax : +966 13 8121190 / 8121189  
Emergency Contact : R&D - Tel: 8121148 / 8121149

## 2. Product Composition

Component	Cas. No.
Styrene Acrylic Emulsion	N/A - Non-Hazardous
Water	7732-18-5
Calcium Carbonate	1317-65-3
Titanium Dioxide	13463-67-7
Ammonium Hydroxide	1336-21-6
Rheological Additives	N/A (Mixture)

## 3. Hazard Identification

Inhalation : None currently known  
Eye Contact : None currently known  
Skin Contact : None  
Currently known Ingestion: None currently known  
Over Exposure : None currently known  
Long Term Exposure : None currently known  
Other Health hazards : None currently known

## 4. First Aid Measures

Skin Contact : Wash with water when wet and use proprietary hand cleaner when dry. Remove any contaminated clothing.  
Eye Contact : Rinse with copious amount of clean fresh water. Seek medical advice if irritation persists.  
Ingestion : Seek medical advice immediately.

## 5. Fire Fighting Measures

Flash Point : Not applicable-water based system.  
Explosive Limits : Not established  
Extinguishing Media : The material will not burn until the water evaporated. For residual solids, use water jet, carbon dioxide, dry chemical powder or universal type foam fire extinguishers.  
Special Fire Fighting Procedures : None  
Explosion Hazards : None  
(NFPA) National Fire Protection Assn. 203M UL : 790

## 6. Accidental Release Measures

Spillage or accidental releases:  
Major spills should be collected for disposal. Minor spills may be flushed to sewer, if the local regulations permit.  
Waste Disposal Method:  
The material is not classified as a hazardous waste. Bury in suitable landfill as permitted by local regulations.

## 7. Handling and Storing

Handling and Storing:  
Avoid breathing vapours. Storage and handling area should have sufficient ventilation. Keep the container closed when not in use. Store under cover above +5°C, away from direct sunlight and heat source. Protect from high temperature.

## 8. Exposure Controls / Personal Protection

Respiratory Protection : Use masks when spraying  
Eye Protection : Use safety glasses  
Protective Gloves :  
Recommended Ventilation: Working area should have sufficient ventilation.

## 9. Physical & Chemical Properties

Appearance : White or coloured flowable liquid  
Odour : Slight ammoniacal odour  
Boiling Point : 100 °C  
Freezing Point : 0 °C

Specific Gravity : 1.28  
Solubility In Water : Fully miscible with water  
Percent of Volatiles : 36 %  
Vapour Pressure : Same as water

## 10. Stability & Reactivity

Stability : Stable under normal temperatures and pressures.  
Hazardous Polymerization : Hazardous polymerization not indicated.  
Conditions to Avoid : Excessive heat and freezing  
Incompatible Materials : Strong oxidizers and acids  
Hazardous Decomposition Products : No known issues under normal usage conditions

## 11. Toxicological Information

Acute toxicity : No record of acute effects found. Toxicity levels not established.  
Skin and eye contact : If the product adheres to skin, irritation may occur when it dries.  
Chronic toxicity : No record of chronic effects found. Toxicity levels not established.  
Carcinogenicity : No record of carcinogenicity effects found. Toxicity levels not established.  
Mutagenicity : No record of mutagenicity effects found. Toxicity levels not established.  
Reproductive hazard : No record of reproductive hazard found. Toxicity levels not established

## 12. Ecological Information

Aquatic toxicity – fish : May have short-term environmental effects. Contain, monitor & remove.  
Aquatic toxicity – daphnia : May have short-term environmental effects. Contain, monitor & remove.  
Aquatic toxicity – algae : May have short-term environmental effects. Contain, monitor & remove.  
Biodegradability : May have short-term environmental effects. Contain, monitor & remove.  
Bio-accumulation : Based on its structural properties, the product is not biologically available. Accumulation in organisms is not to be expected

## 13. Disposal Considerations

For large quantities : Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Normally suitable for incineration by an approved agent.  
For small quantities : Do not pour leftover paint down the drain. Unwanted paint should be brushed out on newspaper, allowed to dry and then disposed of via domestic waste collection. Empty paint containers should be left open in a well-ventilated area to dry out. When dry, recycle the container via domestic recycling programs with local authorities. Check with your local council first.  
Disposal of packaging : Incinerate or landfill.

## 14. Transportation Information

Transportation :  
Synroof Hi Build is not classified as hazardous for transportation.

## 15. Regulatory Information

Labelling according to KSA directive: not required  
Symbol and indication of hazards contains: not required  
Risk phrases :  
Safety phrases :  
Special labelling :  
National regulation : KSA  
Further information : Keep container closed

## 16. Other Information

The information contained in this safety data sheet is intended to assist in the use of above product without risk to safety or health and is based on current knowledge and experience. The data does not signify any warranty with regard to the products properties.