



The Chemical Company

SONOSHIELD[®] HLM 5000 (Masterpren 450 TF)

Elastomeric liquid applied membrane

DESCRIPTION

SONOSHIELD HLM 5000 is a single component, bitumen modified, polyurethane based, waterproofing coating that cures by reaction with atmospheric moisture to form a tough but flexible waterproofing membrane.

FIELDS OF APPLICATION

SONOSHIELD HLM5000 is designed to be used as an effective waterproofing membrane in a variety of structures both above and below grade. Applications include:

- internal tanking of pools, water tanks, sumps, reservoirs, etc., before tiling or other surface finishing
- external tanking of masonry / concrete walls of basements, swimming pools, sumps and subways
- waterproofing of terraces, balconies, kitchens and toilet floors
- R.C. Roofs
- below grade floor slabs

FEATURES AND BENEFITS

Flexible	Can stand moderate movements of hairline cracks.
Seamless	No joints or laps to allow ingress of water.
Bitumen modified	Tar free. More environmental friendly.
Resistant to common chemicals	The membrane withstands exposure to subsoil salts, sewage, water treating chemicals, etc. more effectively. Versatile.
Single Component	No mixing needed. Saves time and labour.

TYPICAL PERFORMANCE DATA

Elongation at break (ASTM D412)	: >700%
Tensile strength (ASTM D412)	: >1.2 N/mm ²
Water Vapour Transmission (g/m ² . 24hours) (ASTM E 96)	: 24
Cracking Bridging (ASTM C 836)	: >2mm
Shore A Hardness (7 Days Cure) (ASTM D 2240)	: 64
Service Temperature (°C) (ASTM G 26)	: -40°C to 60°C
Atlas Xenon Arc (1000 hours) (ATSM E 96)	: No hardening

PROPERTIES

Supply form	: Thick Liquid
Self-levelling grade	- For horizontal surfaces
Roller grade	- For upturns, vertical surfaces and some horizontal surfaces
Colour	: Black
Service Temperature	: -40°C to 60°C

APPLICATION

To achieve a homogeneous mix, the material must be thoroughly mixed with a mixing device at about 300 rev/min before using. Ensure that the mixing device reaches side and bottom areas of the mixing vessel. Stir for at least 3 minutes or until the blend is homogeneous and streak free.

Surface Preparation

Correct substrate preparation is critical for optimum performance. New concrete must be properly water cured for at least 14 days. It is recommended to avoid using curing compounds for curing the surfaces that will be treated with **SONOSHIELD HLM 5000**.

In new construction, ensure that the drains, vents and drain openings are properly located.

Surfaces should be structurally sound, clean dry and free from loose particles, oil, grease, or any other contaminants. Cement laitance, loose particles, mould release agents, curing membranes, and other contaminants must be removed by wet grit, blasting, high pressure water jetting (approx. 150 bars) or other such effective methods.

Existing leaks:

Arrest all existing water leaks from the surface using MASTERSEAL 590 (Waterplug) or other suitable method. Consult BASF Construction Chemicals for advice.

Surface defects:

Repair all static cracks using SONOLASTIC NP1.

Dynamic joints:

Use SONOLASTIC NP1 to seal the joints. Apply a debonding coat of wax or bond breaker tape over the cured sealant before the application of **SONOSHIELD HLM 5000**.

Vents, drains, pipes, etc.:

Clean any rust from the metal pipes and vents. Apply anti-rust treatment such as EMACO S40 ZR (Barrazine SP) followed by a protective paint before refitting. Cut out approximately 10mm wide groves around any pipe protrusions and seal them with SONOLASTIC NP1.

BASF Construction Chemicals offices in ASEAN

Singapore Tel :+65-6861-6766 Fax :+65-6861-3186	Malaysia Tel :+60-3-5628-3888 Fax :+60-3-5628-3776	Indonesia Tel :+62-21-526-2481 Fax : +62-21-526-2541	Thailand Tel :+66-2204-9427 Fax :+66-2664-9267	Vietnam Tel :+84-650-3743-100 Fax :+84-650-3743-200	Philippines Tel : +63-2-889-4321 Fax : +63-2-889-4361
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Pre-treatment :

Apply a 1mm (wet) coat of **SONOSHIELD HLM 5000** on all areas repaired as above, including expansion joints, using a squeegee. Extend the coating to about 100mm around repairs.

Install fillets in all corners to facilitate a continuous membrane after application.

Priming

Priming is not normally required on good quality concrete surfaces. However, on porous and absorbent surfaces, prime the surfaces with a thin coat of **SONOSHIELD HLM 5000** diluted with 20% of xylene by volume, using squeegee, to fill air voids completely. Air entrapment with voids may cause blisters. When the surface is dry and tacky, apply the body coat.

Placing

Avoid application during inclement weather or when it is imminent.

Apply **SONOSHIELD HLM 5000** when substrates are dry and temperatures are between 14°C to 38°C.

Apply **SONOSHIELD HLM 5000** evenly onto the prepared surfaces with a stiff brush, rubber edged notched squeegee or by airless spray to a wet film thickness of 1.2mm.

On horizontal surfaces, mark areas of 15.7m² and spread the contents of one drum on each such area evenly. Use a wet film thickness gauge to monitor coating thickness.

Extend the coating to skirt the peripheral vertical surfaces at least up to a level slightly higher than the final finished level of the surface. Apply any cement and sand screed after the coating has achieved full cure, over which, tiles or other trafficable surfaces can be laid. Provide expansion joints in the screed at the same location as those in the substrate. On vertical surfaces, apply by roller or spray at the same rate as horizontal surfaces.

Temporarily protect the membrane from mechanical damage during application using polystyrene boards or an equally effective alternative.

After completion, protect the membrane by a screed, paving soil or by lining with tiles to prevent mechanical damage in service.

CURING

SONOSHIELD HLM 5000 is self-curing. Full cure is normally achieved within about 2 days depending on ambient temperatures and humidity.

Note: Where required, a water test should be conducted after the membrane has achieved full cure.

CLEANING

Clean tools and equipment with xylene immediately after use.

ESTIMATING DATA

The minimum recommended coverage of **SONOSHIELD HLM 5000** is 1.2L/m² (1.2mm w.f.t.) to obtain a 1mm thick dry film build. Each 18.93L drum of **SONOSHIELD HLM 5000** will cover 15.7m².

Actual coverage depends upon the method of application and the texture and porosity of the surface.

PACKAGING

SONOSHIELD HLM 5000 is available in 18.93L (5 US Gal).

SHELF LIFE

SONOSHIELD HLM 5000 can be stored for 6 months in tightly sealed original packaging if stored in a dry, well-enclosed area at moderate temperature.

PRECAUTIONS

Fire : Product is combustible. Avoid exposure to naked flame. Do not smoke while handling the product.

Flash point : 90°C

The vapours of solvents used for cleaning can be irritating. It is therefore recommended that cleaning is done in well ventilated areas.

For detailed Health, Safety and Environmental Recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

AN/SshieldHLM5000/v2/140409

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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