BASF
We create chemistry

MasterSeal® HLM 5000 R

Liquid cold-applied waterproofing membrane system

DESCRIPTION

MasterSeal HLM 5000 R is a single component, moisture curing, polyurethane based waterproofing membrane that cures by reaction with atmospheric moisture to form a tough membrane.

MasterSeal HLM 5000 R protects structures from water penetration while remaining flexible to handle the nominal expansion and contraction of substrates.

RECOMMENDED USES

- Waterproofing exterior concrete & plywood
- Exterior Below Grade on Concrete and Masonry
- Above Grade between two course of concrete or masonry and cavity walls
- Balconies, Planter boxes & Parking Garages
- For podiums and green roofs

FEATURES AND BENEFITS

- **Waterproof -** Protects structure from water penetration
- **Elastomeric** - Permits nominal expansion and contraction of the structure
- **Low Temperature Flexibility** – Wide service temperature , suitable for all climates
- **Single Component** – No complex mixing & easy to use
- **Cold Applied & Seamless** – Eliminates lapping, seaming and precutting
- **Available in Two grades** – Easy application on vertical and horizontal surfaces

PERFORMANCE DATA

Dry Time (H) @ 23^{O}C Tack Free Dry	 <12 <24
Tensile Strength (MPa) ASTM D 412	>2.0
Elongation (%) ASTM D 412	>500%
Tear Strength (N/mm) ASTM D 624	>15
Adhesion Strength (MPa) ASTM C 794	>1
Extensibility After Heat Aging ASTM C 1522	Passes 6mm
Low Temperature Flexibility (o C) ASTM D 1970	-35
Water Absorption (%) ASTM D 570	< 5
Moisture Vapor Permeability (Perms) ASTM E 96	1.5

PROPERTIES

Supply form	Liquid
Color	Black
Solid Content	85%
Density	1.5+/-0.05
Viscosity (cps) @ 23^{O}C Self Levelling Grade Roller Grade	 5000 15000
Service temp, range	-35°C to 50°C

APPLICATION

Surface Preparation

For best results, all concrete deck surfaces should be lightly steel troweled to a flat, uniform surface. A light broom finish is acceptable. New concrete must be properly water cured at least 14 days. Membrane curing compounds must be mechanically removed.

For extremely porous block: Prime with a coat of **MasterSeal HLM 5000 R** diluted up to 25% with xylene.

Remove dust, dirt and other contaminants just before or during application. Surfaces must be dry at the time of application. Air-void pockmarks or honeycombs must be opened up to allow MasterSeal HLM 5000 R to fill the cavities completely.

Pre-striping

Before applying the final membrane, all joints, cracks and openings around protrusions must be sealed by caulking or pre-striping (a preliminary coating of MasterSeal HLM 5000 R applied with a trowel or stiff-bristled brush). Allow to dry overnight before applying final membrane.

When the final membrane is applied, the overall thickness over joints and cracks, at coves and around penetrations should be approximately 2.5 mm on the standard system.

MASTER® BUILDERS SOLUTIONS

BASF

We create chemistry

MasterSeal® HLM 5000 R

Static Joints and Cracks

Joints and cracks less than 1.6 mm should be filled by pre-striping. Apply material so it both fills and overlaps the joint or crack to a width of 100 mm on each side.

Working or Expansion Joints

All joints over 3 mm must be sealed with a Master Builders Solutions urethane sealant. Any working joint less than 3 mm should be routed to a minimum of 6 mm and filled with a sealant. Prevent the waterproofing membrane from adhering to the joint sealant by applying a coat of wax or bond breaker tape over the cured sealant and then pre-striping.

Uncoated Metal Surfaces

Remove dust, debris, and any other contaminants from vent, drain pipe and post penetrations, reglets and other metal surfaces. Clean surfaces to near white to SAE2.5 and prime immediately with MasterSeal P 691.

Provide appropriate cant with MasterSeal sealant to eliminate 90° angles.

Application

A test application is always recommended before proceeding with entire application.

Select the grade of MasterSeal HLM 5000 R that best meets individual job requirements

For horizontal applications, empty contents of pail and spread immediately to ensure workability. Best results are obtained by marking off 10 m^2 areas and evenly spreading the contents of 22.5 Kg unit with a rubber-edged notched squeegee.

For vertical applications, apply by trowel / roller at the rate of 0.4m^2/Kg.

Verify the applied thickness with a wet film gauge as the work progresses.

The integrity of the cured membrane on a horizontal surface is verified by damming the entire area and flooding with water to a depth of 50mm and allowing the water to stand for 24 – 48 hours. Visually inspect the bottom surface to check for any water penetration. If repairs are necessary, the area should be drained and allowed to dry before reapplying **MasterSeal HLM 5000 R.** After application the area should be tested for membrane integrity

Curing

Appreciable properties develop within 24–48 hours at 24°C and 50% relative humidity. Protect **MasterSeal HLM 5000 R** from traffic during curing.

Drainage and Protection

For protection during backfill and where hydrostatic pressure is anticipated, use a suitable geotextile to divert the water.

For protection during backfill only, install protection board as soon as possible following cure of **MasterSeal HLM 5000 R**.

ESTIMATING DATA

Yield

10m^2 - 12.5m^2 per pack of 22.5Kg at Wet Film Thickness of 1.4mm to 1.7mm.

10m^2 - 12.5m^2 per pack of 22.5Kg at Dry Film Thickness of 1.2mm to 1.5mm.

PACKAGING

MasterSeal HLM 5000 R comes in two grades for different applications, dependent on type of surface being applied

- **MasterSeal HLM 5000 R SL** (self-leveling) is formulated for application by squeegee or trowel to horizontal areas.
- **MasterSeal HLM 5000 R RG** (Roller Grade) is a versatile formulated version for spray application and or rolled onto horizontal or vertical surfaces.

All grades are available in 22.5 Kg Pails.

SHELF LIFE

MasterSeal HLM 5000 R has a shelf life of 6 months. Store out of direct sunlight, clear of the ground on pallets protected from rainfall.

PRECAUTIONS

For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the BASF Material Safety Data Sheet (MSDS) from our office or our website

ID# MasterSeal_HLM_5000 R Asean_v1.0316

STATEMENT OF RESPONSIBILITY	The technical information and application advice given in this BASF 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	Field service where provided does not constitute supervisory responsibility. Suggestions made by BASF either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not BASF, are responsible for carrying out procedures appropriate to a specific application.

BASF Construction Chemicals offices

Singapore
Tel: +65-6861-6766
Fax: +65-6861-3186

Malaysia
Tel: +60-3-5628-3888
Fax: +60-3-5628-3776

Indonesia
Tel: +62-21-2988-6000
Fax: +62-21-2988-5935

Thailand
Tel: +66-2-664-9222
Fax: +66-2-664-9267

Vietnam
Tel: +84-650-374-3100
Fax: +84-650-374-3200

Philippines
Tel: +63-2-811-8000
Fax +63-2-838-1025

Hong Kong
Tel:+852-2408-4400
Fax:+852-2408-4401

Website: www.master-builders-solutions.asiapacific.basf.com