

MASTERSEAL® HLM 5000R

Liquid cold applied elastomeric waterproofing membrane

(Formerly known as Sonoshield HLM 5500)

DESCRIPTION

Masterseal® HLM 5000R is a single component polyurethane based coating that cures by reaction with atmospheric moisture to form a tough but flexible waterproofing membrane.

The product is available in two grades:

Masterseal® HLM 5000R V – for application on vertical surfaces and **Masterseal® HLM 5000R H** – for application on horizontal surfaces

Depending on the area, the V grade can also be used on horizontal surfaces but the H grade can not be used on vertical surfaces.

RECOMMENDED FOR

Masterseal® HLM 5000R is designed for use as an effective waterproofing membrane on below grade concrete structures and between concrete slab applications.

Applications include:

- External coating of walls in basements, sumps, subways and lift wells.
- Waterproofing of terraces, balconies, wet areas and basement floor slab as a sandwich treatment.

FEATURES AND BENEFITS

- **Waterproofs substrate** - protects substrates from damage by water penetration.
- **Single component, Liquid applied** - easy to install even over complex profiles.
- **Retains flexibility after heat ageing** - performs even after wide variations in temperature.
- **High tensile strength** - tough, durable, long term protection.
- **Resistant to biological and chemical attack** - durable even after common, subsoil biological and chemical aggression.
- **Excellent bond with substrate** - eliminates bonding agent, torching, etc
- **Free from Bitumen** - environmentally friendly.

PERFORMANCE DATA

Note: Applicable for both V and H grades	
Tensile strength (ASTM D 412), N/mm	≥2.6
Elongation at break (ASTM D 412), %	≥700
Bond strength on wet substrate, N/mm	≥0.5
Properties tested to GB T12950-2003	
Water impermeability, 0.3MPa, 30min	Passes
Solid content, %	≥85
Surface dry time (at 25°C, 50% R.H.), h	≈7
Tack-free time (at 25°C, 50% R.H.), h	≤12

Tear strength, N/mm	≥17
Low temp bending without cracking, °C	-40
Retention after heat ageing	
Retention of tensile strength, %	>90
Elongation at break, %	≥600
After chemical ageing	
Retention of tensile strength, %	>75
Elongation at break, %	≥600

The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.

PROPERTIES

Supply form	Thick liquid
Colour	Black
Density (at 25°C, 50% R.H.), kg/L	1.35±0.05
Shore A hardness (ASTM C836), No.	55±5
Application temperature	5°C to 35°C
Service temperature	-30°C to 60°C

Test conducted by Setsco (Singapore):

Curing at ambient condition for 7 days: (ASTM D412:2006a)	
Tensile Strength N/mm ²	≥3.14
Elongation at break, %	≥930
After heat ageing at 50°C for 14 days (ASTM D412:2006a)	
Tensile Strength N/mm ²	≥3.45
Elongation at break, %	≥890
Chemical immersion for 72 hrs in 0.5% NaOCl (ASTM D412:2006a)	
Tensile Strength N/mm ²	≥2.49
Elongation at break, %	≥910
Chemical immersion for 72 hrs in 1.25% NH4OH (ASTM D412:2006a)	
Tensile Strength N/mm ²	≥2.64
Elongation at break, %	≥890
Chemical immersion for 72 hrs in 3.7% HCl (ASTM D412:2006a)	
Tensile Strength N/mm ²	≥2.90
Elongation at break, %	≥900
Adhesion Strength (ASTM D4541: 2002)	
Adhesion Strength N/mm ²	≥1.09
Mode of Failure, %	>90
Remarks: Cohesive failure within G40 concrete substrate	

