

## INTRODUCTION:

**ROOFMATE® UNIVERSAL** is solvent born high solid elastomeric coating utilizing the latest advances in polymer technology. Highest quality resins are combined with reinforcing laminar pigments and non-migrating fire retardant, resulting in superior durability, weatherproofing, ultraviolet resistance, algae/mildew resistance and fire retardancy. **ROOFMATE® UNIVERSAL** is highly reflective, thermal insulating, permanently flexible, breathing membrane, allowing moisture vapour from the substrate or building interior to escape while remaining impervious to mass water penetration from the exterior. It is available in high tensile strength version for roof areas subject to heavy maintenance traffic, severe weather conditions, chemical fallout etc.

## Uses:

- Cured concrete substrate (Flat or sloping)
- All metal roofs
- Polyurethane foam, Asphalt shingles, EPDM, Hypalon, bitumen etc.
- Wood
- Old buildups

## General Introduction:

**ROOFMATE® UNIVERSAL** can be easily applied over a variety of roofing substrates including aged built-up, polyurethane foam, asbestos, galvanized steel, asphalt shingles, or cured concrete, and offer the following benefits:

**ROOFMATE® UNIVERSAL** is designed to achieve the highest performance level in the market, and provides for the lowest total cost in use. **ROOFMATE® UNIVERSAL** can be installed on most roofing substrates including metal, TPO, asphalt, concrete, polyurethane, EPDM and others. It also satisfies the requirements of ASTM D6083 and achieves Energy Star rating.

**ROOFMATE® UNIVERSAL is the Best Roofing Solution Available in India:**

## Peak Performance

- Superior water resistance—stands up to ponding water
- Higher tensile strength
- Excellent adhesion to roofing substrates

- Improved elasticity—withstands roof contractions and expansions
- Increased dirt pick-up resistance

### **Lower Installation Costs**

- Fast cure means a second coat can be applied within four hours
- Eliminates recoating due to weather-impacted curing
- Does not need a primer

### **Withstands Adverse Weather Conditions**

- **ROOFMATE® UNIVERSAL** will not wash off with overnight rain
- Can be installed in humid or cold conditions without concern
- Extends the installation season, which equates to increased installations by applicator, hence free from weather-related issues
- Will not yellow over time.

### **Proven and Time-Tested Product**

- Energy Star rating achievable and passes ASTM D6083 requirements
- Easy- to-use material, from pail direct to field application, can be spray or roller-applied
- Retains colour, resists chalking

### **Advanced Polymer Technology**

- Uses patented polymer, with higher solids content, hence more benefits to clients
- Reaches lower VOC levels, well within the EPA regulations

### **Insulation and Cool Roof**

Although these Roof Coats enjoy very low Conductance (0.05 W/mK), it is the combination of their high Reflectance (0.88) (standard black has reflectance at 0.05), high Emittance (0.88) , Solar Reflective Index at 108 (Black surface has SRI at 0) and endothermic Effect that makes them a very good choice for protecting your roofs from heat build-up. Unlike typical mass insulation, where heat conduction is just slowed down, this technology keeps the heat out. Sun light only produces heat when it is absorbed by the roof surface, and being able to keep heat from forming into the surface of the roof is a very effective way to insulate. The cooling process of

Endothermic Effect ensures that the surface continues to insulate, even if Reflectance is diminished with aging, dust build-up or darker colours.

### Tensile Strength and Elongation

Thermal movement of a roof requires high tensile strength and elongation as well. The tolerance for movement of **ROOFMATE® UNIVERSAL** is essential due to the dynamic nature of a roofing substrate which expands and contracts due to climatic conditions and the shifting and settling of the foundation.

These properties also give properly-formulated **ROOFMATE® UNIVERSAL** the needed flexibility and elasticity to withstand impact from foot and other abuse without rupturing.

### Low Temperature Flexibility

Coating for dimensionally unstable roofing substrates must have long-term low temperature flexibility. This is necessary to accommodate thermal expansion and contraction of the substrate, so that coatings will not fail over an extended period of time or with extreme weather conditions. It should be remembered that the effects of extreme weather conditions are not restricted to cold climates. Evaporation of water after a sudden thunderstorm on a hot day in any geographic location can rapidly drop the roof temperature as much as 40 °C, causing severe thermal stress on the roof surface.

**ROOFMATE® UNIVERSAL** can withstand a 180 degree flexibility bend at -15 °C without cracking; this flexibility is retained over time. Long term resistance to cracking extends the life of the roof. IT IS IMPORTANT TO NOTE THAT ELASTOMERIC ROOF COATING should exhibit good mechanical properties at room and low temperatures and after exterior exposure.

### Stop Leaks

**ROOFMATE® UNIVERSAL** stops most small holes in the substrate by application directly to surface substrate. It is the only product of its kind to withstand ponding water on terrace.

## Dirt Pickup Resistance

ROOFMATE® UNIVERSAL elastomeric roof coating combine the inherent flexibility of pliable, low TG polymers with long term resistance to dirt pickup. ROOFMATE® UNIVERSAL resists dirt pickup and retains their white, reflective appearance.

## Colours

ROOFMATE® UNIVERSAL is stocked in white, and ivory colours. An unlimited selection of custom colours are also available for specific application.

## TYPICAL CHARACTERISTICS:

Nature	ASTM Method	Results	ASTM 6083 Requirements
Colour	Not Applicable	White / Ivory	Not Applicable
Volume Solids, %	D 2697	51	>50
Surface dry time at 30°C	Not applicable	30 minutes	Not applicable
Initial Elongation at 22.7 °C, %	D2370	800	100 min
Elongation (1000 hours@ 22.7°C) %	D2370	825	100 min
Initial Tensile Strength at 22.7°C, Psi	D2370	524(3.6MPa)	200 min
Tear Resistance (Die C) lbf/in	D624	129	>60
Permeance (0.490 mm film, 22.7°C, inverted), perms	D1653	4.3	<50
Water Swelling (0.490 mm film, 22.7°C, 168 hrs) %	D471	0	20 max
Wet Adhesion (galvanized, 168 hrs, 22.7°C) pli	C794/D903	4.5	2 min
Fungi Resistance	D4798	0	0
Low Temp Flex	D522	Pass	Pass
Appearance (1000 hrs accel weathering)	D4798	Pass	No cracking or Calking
Recommended Coats	Not applicable	2 to 3 coats depending upon the substrate to get 0.4mm thickness	Not applicable
Coverage	Not applicable	9 ft <sup>2</sup> /kg/0.5mm	Not applicable
Packing	Not applicable	5kg, 20 kg	Not applicable

## Mixing

Use a power mixer capable of uniformly mixing the entire container prior to use. Reducing the mixture is not recommended, as it affects the coatings ability to achieve a heavy film build with excellent verticle hold and hide.

## Surface Preparation

All surface must be clean and dry and free of any dust, dirt, oil, surface chemicals or other chemicals or other contaminants that may interface with optimum adhesion. All loose gravel, if present, shall be removed by power sweeping and/or vacuuming. Remaining gravel shall be power spud to achieve the smoothest surface possible. Any unsound areas in the roof, i.e. blisters, delamination, deterioration, moisture saturation, severe corrosion, sharp projections, ridges, etc. shall be repaired or replaced.

Low areas that hold excessive ponding water must be brought into conformance by installing additional drains or adding additional slope to the existing drains.

## Application

Reinforce all moving cracks, seams, splits, control joints, verticle/ horizontal interfaces, roof termination pints, openings, transition areas, around the base of all vents pipes and other protrusions, as well as around HVAC units and other roof mounted equipment with Fibrecon Mesh, a polyester reinforcement fabric, embedded in to **ROOFMATE® UNIVERSAL**.

All roof preparation materials shall be allowed to dry thoroughly prior to application of the **ROOFMATE® UNIVERSAL** coating.

Immediately prior to the application of the **ROOFMATE® UNIVERSAL** coating system, all dust, dirt, and other contaminants shall be flown off the roof surfaces to be coated using high pressure compressed air.

1. Apply **ROOFMATE® UNIVERSAL** base coat (Ivory in colour), at a minimum rate of 0.15 kg/m<sup>2</sup>.
2. After allowing the basecoat to dry (3 to 6 hours) apply **ROOFMATE® UNIVERSAL** at a minimum rate of 0.10kg/m<sup>2</sup>.

3. The total coat, minimum dry film thickness required at any location shall be 400 micron for flat roofing.

Upon completion of the roof coating system, Multichem , Architect, or Applicator shall make final inspection to determine the dry film thickness of the coating and to verify that systems meets the manufacturers requirement of Warranty.

## Thinning

Not advised at all.

## Equipment

Roller or airless spray application is recommended. Very small areas may be brushed. When **ROOFMATE® UNIVERSAL** Roof Coatings are applied by brush, three (3) coats cross-brushed are required for adequate protection.

Airless Spray:

Tip Orifice .31 inches

Atomizing Pressure 2200 - 2500 psi

Fan Spread 0 degrees

Pump 1gallon per minute at 2500 psi

Filer Remove filters and screens

\*\*\* Prime pump with water before attempting to spray **ROOFMATE® UNIVERSAL** Roof Coatings. (Acceptable equipment includes Binks Super Hornet, Graco 433 or larger, and many others)

METHODS

To assure adequate and uniform coverage, the “spray and back roll” or the “cross spray” techniques are recommended. **ROOFMATE® UNIVERSAL** Roof Coatings should be applied in full wet coats. CLEAN UP Clean all tools and equipment with warm soapy water/ paint thinner or mineral spirit. Rinse with clean water; flush mineral spirits through spray equipment to prevent rusting and to lubricate packing and gaskets.

## Warranty

**ROOFMATE® UNIVERSAL** warranty is available in five (5), ten (10) and fifteen (15) year periods. The warrantor guarantees the installations against leaks caused by normal weather. Refer to individual warranty document for additional information.



# ROOFMATE® UNIVERSAL

## Next Generation Elastomeric Roof Coating

### SAFETY DATA:

- Irritating to eyes, respiratory systems and skin.
- Risk of serious damage to eyes.
- Keep out of reach of children. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.
- After contact with skin, wash immediately with plenty of clean water.
- Wear suitable protective clothing, gloves and eye/face protection.

### WARRANTY

Multichem warrants **ROOFMATE® UNIVERSAL** to be free from manufacturing defects as defined in this warranty. Manufacturing defects are considered to be those defects that occur due to the quality of the ingredients or from the manufacturing process itself. This warranty does not include labor costs and other costs or expenses associated with the removal or installation of **ROOFMATE® UNIVERSAL**. Because the Multichem does not perform the actual installation, it cannot be held responsible for the results of the application. Multichem specifically disclaims problems that occur due to weather conditions, structural movement, structural design flaws and application techniques. This warranty is in lieu of all other warranties expressed or implied including the warranty of merchantability and fitness of purpose and of all other obligations or liabilities on Multichem part. Multichem neither assumes nor authorizes any person to assume for Multichem any liability in connection with the sale and installation of **ROOFMATE® UNIVERSAL**. Because of constant improvement of manufacturing techniques and formulations, Company reserves rights to change this datasheet and its contents without prior notice.

