

MRC Liquid Applied Waterproof Coating over Existing Bitumen based Waterproofing

Liquid Applied Waterproof Coatings

DRAFT SPECIFICATION

Ref: Specification No. **xxxxxx/xx (Project Name & Location)**

To be read with Preliminaries/General conditions

***Delete as necessary**

LIQUID APPLIED WATERPROOF ROOF COATINGS

To be read in conjunction with Preliminaries/General Conditions

110 LIQUID APPLIED WATERPROOF ROOF COATINGS

Liquid Applied Roof Coating for waterproofing an existing bitumen based liquid applied or 'torch-on' waterproofing system with 'Guardian' System Warranty.

Warranty: Guardian System Warranty INCLUDING materials, workmanship and maintenance for up to 10 years.

(All equivalent warranty systems to provide an all-encompassing warranty INCLUDING matching the material product guarantee with a workmanship warranty for the same term.)

Waterproofing Coating: MRC Ultracote Waterproofing System with associated Bit-Prime primer.

Supplier: MRC Group, Unit 6, Almar Centre, Crompton Street
Pinetown, KZN, South Africa, KZN.

Web: www.mrc-group.co.za

Email: info@mrc-group.co.za

Base (Substrate for Coating): Bitumen based liquid applied or 'torch-on' membrane.

Preparation: Must be dust and grease free.

Waterproofing System reference:

- MRC Bit-Prime to be used on bitumen based liquid applied or 'torch-on' waterproofing membrane.
- MRC Ultracote Acrylic Waterproofing System.

Coating System reference: MRC Bit-Prime and Ultracote Liquid Applied Waterproofing System.

Application: Coatings can be applied by means of brush, roller or spray (single component airless or conventional spray equipment).

Experienced Contractors: All contractors must be member of the Green Building Council SA, Master Builders Association (MBA), Construction Industry Development Board (CIDB) & South African Institute Occupational Safety & Health (SAIOSH).

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Notes: MRC Bit-Prime After complete drying, the film obtained has a glossy finish and a non-sticky surface. Drying times depend on humidity, temperature and thickness of the film.

MRC Ultracote should be well mixed before use. Apply the first coat at a rate of 0.95 m²/litre and allow to dry. Apply the second coat within 12 hours. Should be resistant to light rainfall after 6 hours, depending on ambient conditions.

Preparation of joints: All joints to be sealed using the MRC Bit-Prime Membrane depending on the size of the joint and its location on the roof.

140 'GUARDIAN' SYSTEM WARRANTY

Warranty Supplier: MRC Group, Unit 6, Almar Centre, Crompton Street
Pinetown, KZN, South Africa, KZN.
Web: www.mrc-group.co.za
Email: info@mrc-group.co.za

Reference: 'Guardian' System Warranty up to 20 years including materials, workmanship & maintenance.

Notes: The 'Guardian' System Warranty is a warranty covering specified materials and perimeter details, workmanship and maintenance of a roofing and /or cladding installation.

The roofing contractor is to read all tender drawings in conjunction with the specification and should ensure that they are complying with the design intent, specification & drawings of the building designer.

160 MINIMUM HEALTH & SAFETY REQUIREMENTS

Letter of Good Standing: The contractor must provide a valid letter of good standing, issued by the Dept. of Labour.

Competency: The contractor must demonstrate to the client that he/she is competent to undertake these works and provide documentary proof thereof. The contractor must provide proof of training given by a Health and Welfare Sector Education and Training Authority (HWSETA) accredited service provider. The training must also be aligned with the SAQA unit standards.

Tender Documents Required: The contractor must provide, as a minimum, the following documents:-

- Occupational health and safety medical certificates for all team members and workers accessing the site incl. managers, directors and sub-contractors.
- Working at height certificates for all team members and workers accessing the roof incl. managers, directors and sub-contractors.
- Hazard identification and risk assessor certificate.
- Fall protection planner certificate.

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- Accident and incident investigator certificate.
- Mechanical elevated working platform (MEWP) operator certificate. (proof of training given by accredited Transport Education Training Authority (TETA) service provider).
- Fire fighting certificate.
- Scaffold erector certificate.
- Scaffold inspector certificate.
- Competency in the use of Eskom rescue kit certificate.

Full time competencies: It is a requirement of this contract that the following competencies be on site on a full-time basis whilst works are being undertaken:

- Hazard identification and risk assessor
- Fall protection planner
- Accident and incident investigator
- MWEPE operator
- Competent person for fire fighting
- Scaffold erectors
- Scaffold inspector

GENERAL REQUIREMENTS

210 Roof Coating Generally:

- Apply coatings to provide a firmly adhered, free draining and completely weatherproof detail.
- Ancillary products and accessories, where not specified, to be types recommended for the purpose by MRC.
- Use only MRC trained and approved contractors for the application of MRC Waterproofing Systems.

280 General Design Requirements:

All works must comply with all current relevant standards, codes of practice, and the Building Regulations to provide a secure, free draining and completely watertight roof, including but not limited to:

- The design must take account of all structural factors to ensure that the waterproof covering is able to accommodate the effect of thermal movement in order to avoid stress or deformation under these conditions.
- The waterproofing components' resistance to dead and imposed loading must be assessed to avoid failure of the component/and or reduction in performance. Where resistance is deemed to be inadequate, suitable measures to mitigate load intensity will need to be considered.
- The design must ensure that the continuity of the waterproof covering is maintained for a vertical height of at least 150mm above the finished roof level at all abutments, penetrations, parapets etc.
- The building owner or their appointed design professional must have satisfied themselves that the roof structure and deck are suitable to receive the dead load of the proposed specification.
- It is strictly the responsibility of the client and/or their design professional to ensure compliance of the proposed specification with all relevant Building Regulations.

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PRODUCTS

- 350 Primer:**
- Type:** MRC Bit-Prime single component primer for bitumen substrates
- System Supplier:** MRC Group, Unit 6, Almar Centre, Crompton Street
Pinetown, KZN, South Africa, KZN.
Web: www.mrc-group.co.za
Email: info@mrc-group.co.za
- Colour:** Milky white liquid
- Theoretical solids:** 28 - 32%
- Consistency:** Liquid
- Application:** Coatings can be applied by means of brush, roller or spray (single component airless or conventional spray equipment).
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- 355 Waterproof Coating:**
- Type:** Liquid applied MRC Ultracote single component, water based, acrylic waterproofing system.
- System Supplier:** MRC Group, Unit 6, Almar Centre, Crompton Street
Pinetown, KZN, South Africa, KZN.
Web: www.mrc-group.co.za
Email: info@mrc-group.co.za
- Colour:** Standard Grey or White but alternative colours can be manufactured depending on the size of the contract
- Density:** 1.08
- Theoretical solids:** 49%
- Volume solids theoretical:** 45%
- Consistency:** Liquid
- Viscosity:** 15,000 cps @25°C
- Finish:** Semi-gloss
- Spread rate:** 0.45 m² / litre (excluding wastage)
- WFT per coat:** 2,000 microns (2 mm)
- DFT per coat:** 1,000 microns (1 mm)
- Recommended coats:** 2
- Application:** Coatings can be applied by means of brush, roller or spray (single component airless or conventional spray equipment).

Based on 25°C and 50% relative humidity the following curing times apply.

- Touch dry:** 3 hours
- Full cure:** 24 hours
- Over-coating time:** 3 – 12 hours

EXECUTION GENERALLY

- 410 Adverse Weather:**
- Roof coating must not be applied in wet conditions or at temperatures between 5 - 30 C and Relative humidity ≤ 70%.
 - Suspend work in severe continuous wet weather unless an effective temporary roof is provided over the working area.

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- If unavoidable wetting of the construction or coatings during application does occur, take prompt action to minimise and make good any damage.
- Coating must not be applied in windy conditions (wind speeds in excess of 7m/s) unless adequate temporary windbreaks are erected.

420 Suitability of Substrate:

Before applying roof coatings ensure that:

- Surfaces to be coated are firmly fixed, clean, dry, smooth, and free from frost, contaminants, loose materials, voids, protrusions and organic growths.
- All preliminary work including formation of up stands, kerbs, box gutters, sumps, grooves, chases, expansion joints, etc. and fixing of battens, fillets, anchoring plugs/strips, etc. is complete and satisfactory.
- Existing coverings and/or new construction are approved by MRC for compatibility with their products.
- Moisture content and stability of the substrate must not impair the integrity of the roof coating system.

466 Storing of Materials:

- Materials must be stored carefully on a clean dry surface, under cover and raised clear of the ground.
- Must be stored between 5 – 30°C.
- The load-bearing capacity of the structure must be checked if material is to be stored at roof level.
- Only sufficient material for the day's schedule should be taken out of store, or uncovered, and placed close to the area being worked.
- After waterproofing works completed no materials can be stored on the installed waterproofing system.

EXISTING SUBSTRATES

521 Sterilization Treatment:

- Use approved detergents for more effective washing and to remove oil and grease. Organic growth can be treated using an approved fungicide wash.
- Steam cleaning or organic emulsion cleaner (Water soluble degreaser) (ASTM 4258) and allow drying. Water break free surface (ISO 8501-1) water spray and visual; should form a continuous film when water is applied in thin layer.

SURFACING/COMPLETION

910 Inspection of Roof Coating:

- Check coating surfaces when cured for pinholes and discontinuities.

Defective areas: apply another layer of coating

912 Protection:

- As soon as an area of waterproofing has been completed, it should be inspected and tested upon notification of completion by the contractor. Completed areas should not be used as a building platform or as an access route by other trades. If unavoidable, appropriate protection must be provided for the duration of the construction period.

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Care should be taken not to mark, dent or damage the works while laying any additional protection. Inspection and/or leak testing must always take place after removal of such protection.

- Roofs accessed for regular maintenance of plant, or parts of the building, should be given consideration in providing a predetermined route to and from the entry point to minimise potential hazards.

940 Completion:

Ensure that:

- Detail areas are left clean.
- Work necessary to provide a weather-tight finish: complete.
- Storage of materials on finished surface: Not permitted.

942 Maintenance:

- It is recommended that all flat roofs be inspected at a minimum frequency of twice a year. Ideally, inspections should be carried out in spring and autumn accounting for the effects of annual extremes of weather to be checked. Inspection should also be carried out following works on the roof by other trades, or following installation of new roof equipment.
- All inspections/and or maintenance actions carried out at roof level must be in full compliance with the appropriate health and safety regulations, and particularly those specifically dealing with working at height.

950 Documentation:

Timing:	Submit at handover.
Contents:	Manufacturers' guarantees and warranties.
Number of copies:	3 Number.

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Note:

Draft Specification for MRC Waterproofing Systems.

The purpose of this Draft Specification is to assist the Project Designer and Quantity Surveyor in producing their respective documentation for any project under consideration.

It is provided in good faith for use at the discretion of the respective consultant, to be amended and edited as required to suit the particular project requirements.

MRC Systems (PTY) Ltd is not privy to detailed contractual arrangements and documentation of an individual project and are therefore not in a position to co-ordinate related work by others. It is not the intention for this draft to relate to any particularly project but to provide a guide to the more common items to be encountered in MRC Waterproofing systems.

Whilst it is the Project Designer/Quantity Surveyors/Planning Supervisor's responsibility to produce their respective documents and we can assist them in their duties, we cannot accept responsibility for any errors or omissions which may occur in tender or contract documents or for compliance with the requirements of Health and Safety/Construction Design and Management Regulations which may be applicable.

Please check to ensure that any amendments to the standard draft, represents a true interpretation of the Project Designer's requirements.

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