ADVANCED COATINGS INC.

RUB-R-WALL FLUID APPLIED WATERPROOFING

1. PRODUCT NAME
Fluid applied waterproofing:
Rub-R-Wall

2. MANUFACTURER
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3. PRODUCT DESCRIPTION
Basic Use: A waterproofing membrane for vertical building elements below grade such as walls and foundations constructed of concrete block, poured concrete, plywood and insulated concrete forms (ICF). Rub-R-Wall prevents the passage of water under hydrostatic, dynamic or static pressure.

Example uses include:

- Foundation walls
- Elevator shafts
- Tunnels

New construction or retrofit.

For commercial, industrial and institutional applications.

Composition and Materials: Rub-R-Wall is a 100% rubber copolymer liquid applied waterproofing membrane (hydrocarbon polymers in hydrocarbon solvents) that is spray applied to the substrate by manufacturer approved applicators.

The more complicated the surface to be waterproofed, the more reason to use a liquid applied membrane. Rub-R-Wall membrane can conform to all irregular shapes whereas a sheet good must be precisely cut and fitted, pieced and seamed whether by hot air welding or adhesive methods. As well as ensuring a thorough waterproofing job, the ease and simplicity of application will also reduce labour costs when compared with sheet goods or built up membrane systems.

The ability of Rub-R-Wall to conform to all irregularities whether intended or not makes it an ideal choice for re-waterproofing where there is little control over initial substrate quality.

There are no seasonal restrictions because Rub-R-Wall can be applied at low temperatures provided substrates are dry and frost-free. Once the membrane is applied it is impermeable to water. The excellent and tenacious bond of the membrane to substrates prevents the lateral movement of water between the membrane and substrate.

The system used for waterproofing:

Is a single layer membrane application (reinforced at joints or cracks) consisting of spraying a 1 mm (40 mils) thickness of membrane over a properly prepared substrate.

Limitations: In all cases the waterproofing must be protected from ultraviolet light rays and mechanical damage and should not be left permanently exposed. It can be protected by means of protection board or rigid insulation.

Thickness: 1 mm (40 mils) for single layer applications.

Application Rate: Over poured walls or parged block: 2.3 m^2 to 3.3 m^2/4.5 L (25 to 35 sq. ft./gal.)

Over standard concrete block: 1.9 m^2 to 2.5 m^2/4.5 L (20 to 27 sq. ft./gal.)

Colour: Green

4. TECHNICAL DATA
Applicable Standards: Meets the requirements of ASTM E-96 Type 1 water vapour permeance. Refer to Physical Properties chart for complete list of ASTM Standards governing Rub-R-Wall properties.

Environmental Considerations: Rub-R-Wall membrane is non-toxic, non-carcinogenic and will not contaminate ground water.

Above: Rub-R-Wall applied with pressure spray.

Above: Rub-R-Wall applied over poured concrete surface of foundation walls.

MANU-DATA 9663
Printed in Canada

5. INSTALLATION

Preparatory Work: The successful performance of Rub-R-Wall relies on 100% bond to substrate. To achieve complete adhesion, certain substrate requirements are necessary. Surfaces should be relatively smooth, clean, solid, free of scaling, fins, honeycombed areas, loose material, frost, dampness, dust, dirt, oil, grease, curing compounds and other foreign matter detrimental to adhesion of membrane.

Concrete surfaces should have a wood float finish or smoother. Refer to Examination section of specification for substrate requirements by others (new construction).

Under the work of the waterproofing section of work, the following preparatory requirements include:

1. Removing loose or foreign matter which might impair adhesion of materials.

2. Filling any minor imperfections in the substrates such as form tie holes and cracks with a proprietary mastic substrate filler (Rub-R-Wall Mastic).

Methods: Rub-R-Wall is applied using manufacturer approved applicators who undergo training and are monitored for quality performance.

Rub-R-Wall is sprayed on to surfaces using alternating horizontal and vertical passes to ensure complete coverage of substrate. Penetrations are sealed water tight.

Rub-R-Wall is applied within the recommended application temperature range (may be applied successfully at temperatures as low as -15°C (5°F).

Airless spray equipment having a minimum pressure of 20 684 kPa (3000 psi) is used to apply Rub-R-Wall.

The coverage rate of the completed membrane application provides a seamless, monolithic surface with a final thickness of 1 mm (40 mils).

Typically, one crew can apply approximately 372 m^2 (4000 sq. ft.) of area per day. Drying time of Rub-R-Wall is approximately one hour, given average conditions and standard thickness, and may be influenced by relative humidity, temperature and air flow.

Protection board or insulation may be applied to membrane surfaces after an initial set time of approximately 20 minutes while the membrane is still tacky, to prevent damage from coverings such as backfill, overburden, concrete, asphalt pavement or pavers. Once applied, this protection board (or insulation) is firmly and permanently adhered into place and cannot be removed. Where insulation acts as the protective cover on vertical surfaces wedges or clips, normally used to secure the insulation are eliminated.

Precautions: Protection board or insulation will adhere tenaciously to the Rub-R-Wall membrane so care must be taken to insure proper initial placement.

Do not backfill prior to 24 hours after membrane application. Ensure that backfill material is free of debris, organic material, boulders, rocks, concrete block debris or any other deleterious material not considered suitable fill.

Ensure that footing drains are installed in accordance with building code requirements.

Building Codes: Rub-R-Wall meets the intent of Part 5 (Section 5.5.2 - Dampproofing and Waterproofing) and Part 9 (Section 9.13 - Waterproofing and Dampproofing and 9.13 - Slabs-on Ground) of the National Building Code (NBC). Rub-R-Wall meets the requirements set by, BMEC #94-04-183.

6. AVAILABILITY AND COST

Availability: Rub-R-Wall is available across Canada and throughout the U.S., usually shipped from stock. Contact Advanced Coatings Inc. for list of Dealers/Applicators.

Cost: Current price list available from Dealers/Applicators along with standard conditions of sale.

7. WARRANTY

The information herein is the best available relating to Rub-R-Wall, and the recommendations contained herein are based on tests believed to be reliable. We warrant our products to be of merchantable quality and suitable for the purpose for which it is intended. We do not make any other warranty, express or implied, statutory or otherwise.

8. MAINTENANCE

Rub-R-Wall membrane does not require any maintenance. Damaged areas are easily repaired by spraying over affected areas. Cold joints or re-coating is not a problem; newly applied material easily blends with existing Rub-R-Wall material to provide a monolithic membrane.

9. TECHNICAL SERVICES

Technical support is available from Advanced Coatings Inc. call Toll Free Head Office: (800) 787-8059 or Toll Free Branch Office: (800) 730-0814.
Specification assistance.
Site advice and recommendations.

10. RELATED REFERENCES

Autocad package of architectural waterproofing details and accompanying Master Specification (Microsoft Word) suitable for use by specifying authorities.

Advanced Coatings Inc. Rub-R-Wall Air/Vapour Barrier Manu-Data literature.

Above: Rub-R-Wall installed in retrofit application.

ADVANCED COATINGS INC.

Rub-R-Wall WATERPROOFING

Typical Physical Properties* (Imperial Measure. Metric chart available upon request).

PROPERTY	TEST METHOD	TEST RESULTS
Water Vapour Permeance	ASTM E96 (water method)	0.093 perms for 40-mil dry coating grams /ft^2 / hr in Hg.
Elongation (%)	ASTM D412 (die C)	1800+
Low-Temperature Flexibility	Bend around 0.5 inch mandrel	Flexible to -20° F (-29° C)
Abrasion Resistance	700 psi on .06" x .06" point moving 1" per sec.	Less than 0.10% membrane loss
Asphalt Content	Non Applicable	0.0%
180° Peel Adhesion	Metal Plate	18 lbs./inch (8 kg/2.54 cm)
Crack Bridging	ASTM C836	Exceeds ten cycles to 1/8 inch (3 mm) at -15° F (-26° C)
Liquid Water Absorption	ASTM D95	Less than 0.5% (weight)
Resistance to Bacteria	ASTM D4299-83 (modified)	No attack
Resistance to Degradation in Soil	ASTM E154 (soil preparation)	Excellent
Resistance to Algae	ASTM G29-75 (modified)	No attack
Resistance to Fungus	ASTM D2020 (modified)	No attack
Resistance to Chemical Attack	Visual	Unaffected by chemicals in concentrations typically found in soils
Solvent Resistance	Visual	Exceeds performance of modified asphalts
Life Expectancy	ASTM D412 ASTM D2240	Exceeds 100 years
Density		6.8 - 7.8 lbs./gal. 0.9 kg/L (approx.)

* Tests conducted by the Ortech Corporation of Mississauga, Ontario and the Akron Rubber Development Labratory Inc., Akron, Ohio. Copy of test reports available upon request.

Rub-R-Wall WATERPROOFING

SPECIFICATION

SPEC NOTE: This waterproofing guide specification is basic and must be adapted to suit the requirements of individual projects. It is written in accordance with the Three-Part Section Format but may be rearranged to suit any format required. Square brackets [ ] indicate choice, alternatives, data required or need for the specifier to make a decision.

1 General

1.1 SECTION INCLUDES
- .1 Substrate preparation.
- .2 Waterproofing membrane.
- .3 [Protective covering].
- .4 [Filter fabric].
- .5 [Insulation].
- .6 [Overburden].
- .7 [Metal sleeve flashings].

1.2 RELATED SECTIONS

SPEC NOTE: Re 1.2. Limit the following listings only to sections that have a DIRECT affect on this section.
- .1 Section [_____] - Asphalt Concrete Paving: Traffic bearing surface course.
- .2 Section [_____] - Cast-In-Place Concrete: Concrete substrate [concrete traffic topping] [slope to drain].
- .3 Section [_____] - Concrete Finishing:
- .4 Section [_____] - Structural Precast Concrete.
- .5 Section [_____] - Unit Masonry.
- .6 Section [_____] - Rough Carpentry: Wood nailers, curbs, cants.
- .7 Section [_____] - Air Barriers.
- .8 Section [_____] - Insulation: Rigid insulation cover.
- .9 Section [_____] - Sheet Metal Flashing and Trim: Counter flashings.
- .10 Section [_____] - Joint Sealants: Sealants and application for waterproofing.
- .11 Section [_____] - Plumbing Specialties: Deck / Area drains.

1.3 SUBMITTALS
- .1 Product Data: Provide data on material characteristics, performance characteristics, limitations and independent water vapour transmission test data.

1.4 QUALIFICATIONS
- .1 Applicator: Company specializing in performing work of this section approved by membrane material manufacturer.

1.5 MOCK-UP

SPEC NOTE: Use 1.5 when specifying full sized erected assemblies required for review of construction, coordination of work of several sections, site testing, education of specific trades involved, or observation of installation.
- .1 Provide mock-up of materials under provisions of Section [01340].
- .2 Construct typical [exterior wall sample panel], [_____] m long by [_____] m wide, incorporating penetration seals [and junction with air barrier], illustrating materials interface and seals.
- .3 Locate [where directed].
- .4 Mock-up may [not] remain as part of the work.
- .5 Allow [24] h for inspection of mock-up by [Consultant] before proceeding with [waterproofing] work.

1.6 PRE-INSTALLATION CONFERENCE
- .1 Convene [one week] prior to commencing work of this section, under provisions of Section [01040].
- .2 Ensure attendance of representatives from inspection company, manufacturer and applicator, and parties directly affecting the work of this section.
- .3 Review conditions of installation, installation procedures, and coordination with related work. Establish manufacturer's requirements for approval of substrate.

1.7 ENVIRONMENTAL REQUIREMENTS
- .1 Ensure application temperature and humidity recommended by material manufacturer is maintained before, during and after installation.
- .2 Do not expose materials vulnerable to water or sun damage in quantities greater than can be installed the same day.
- .3 Install [waterproofing] on dry surfaces, free of snow and ice and during weather that will not introduce moisture into waterproofing system.

1.8 SEQUENCING
.1 Sequence work under the provisions of Section [_____].
.2 Sequence work to permit installation of materials in conjunction with related materials and seals.

1.9 CO-ORDINATION
.1 Co-ordinate work of this section with all sections referencing this section.

2 Products

2.1 MATERIAL
.1 Waterproofing Membrane: Rub-R-Wall liquid applied 100% rubber copolymer membrane having a water vapour permeance of 0.093 perms when tested to ASTM E96, nominal total thickness [of 1 mm (40 mils] [as indicated on the drawings], manufactured by Advanced Coatings Inc. in accordance with physical properties as stated in manufacturer's literature.
.2 Substrate Filler: Rub-R-Wall Mastic, trowel grade heavy-bodied rubber mastic as manufactured by Advanced Coatings Inc.
.3 Joint and Crack Reinforcement Strip: ACI Flashing Tape or Approved Equal, self-adhered waterproof sheet, nominal .25 mm (10 mils) thickness, width as required, supplied by Advanced Coatings Inc.
.4 Protection Board: Reinforced high density polyethylene cross laminated sheeting.
.5 Protection Board: Wrap-N-Drain, Dimpled, High Density Polypropylene (HDPE) sheet barrier providing a continuous air gap of approximately 9.5 mm (3/8") between foundation walls and backfill.
.6 Protection Board: Geo-Wrap prefabricated composite drainage system, a three dimensional polymeric core drain board with a non-woven geotextile fabric fully bonded to the top dimples of the core, compressive strength 250 kN/m^2.
.7 Protection Board: Dow Styrofoam PERIMATE Insulation Drainage Media, 53 mm (2.1")(R-10) or 62.5 mm (2.5") (R-12) extruded polystyrene foam insulation, Class A, Type 2 Drainage Product, CAN/ULC S701-97 Type 4.
.8 Insulation: CAN/CGSB-51.20, Type IV, Type III, extruded, foamed ploy, rigid board, [square] [shiplapped] edges or approved equal.
.9 Gravel for [Drainage Layer] [Setting Bed]: Stone [19 to 32 mm (3/4" to 1-1.4")] size, well graded crushed stone, opaque, non-porous, washed, free from fines, long splinters, moisture, ice and snow.

2.2 ACCESSORIES
.1 Backer Rod: Extruded, round, closed cell, heat resistant foam rod, 50% wider than joint, and as recommended by membrane manufacturer.
.2 Fasteners : For poured concrete and concrete block use 32 mm (1 1/4") concrete nails, non-corrosive self-tapping screws for ICF forms.
.3 Joint Sealers:
1. Traffic Bearing Type [Silicone] [Polyurethane] type, colour [_____], as recommended by membrane manufacturer.
[OR]
2. Traffic Bearing Type: In accordance with Section [07900 - Joint Sealers.]
3. Non-traffic Bearing Type for Substrate Joints: [_____], as recommended by membrane manufacturer.

3 Execution

3.1 EXAMINATION
.1 Verify that surfaces and conditions are suitable prior to commencing work of this section.
.2 Ensure that:
1. Surfaces are sound, dry, even, and free of oil, grease, dirt, excess mortar or other contaminants.
2. Concrete surfaces are cured and dry, smooth and without large voids, spalled areas or sharp protrusions.
3. Masonry joints are flush and completely filled with mortar.
4. Verify that all penetrations, sleeves, etc. are properly placed and secure.

3.2 PROTECTION

.1 Protect adjacent work of other sections from splash, spray or spillage.

.2 Ensure drains, sleeves, vents, pipes and other items passing through substrates to be waterproofed are properly and rigidly installed.

.3 Commencement of installation implies acceptance of [site conditions,] [surfaces,] [substrate].

3.3 PREPARATION - GENERAL

.1 Remove loose or foreign material such as grease, frost, paint, form oil or other material which might impair adhesion of materials.

.2 Fill any voids with mastic substrate filler.

SPEC NOTE: Check if project requires treatment of cracks, surface defects, and joints. Co-ordinate articles 3.3 and 3.4 accordingly. For cracks and joints more than 3 mm in width, please call manufacturer.

.3 Repair defects which will impair adhesion and performance of [waterproofing].

.4 Reinforce cracks 0 to 3 mm (1/8“) wide with layer of ACI Flashing Tape min. 150 mm (6”) wide centered over the crack.

3.4 MEMBRANE APPLICATION

.1 Apply membrane and reinforcing in accordance with manufacturer’s instructions. Ensure full bond of membrane to substrate.

.2 Apply membrane within recommended application temperature ranges. Consult manufacturer when membrane cannot be applied within these temperature ranges.

.3 Using airless spray equipment having a minimum pressure of 20 684 kPa (3000 psi), apply waterproofing membrane in multiple, uniform passes to provide seamless, monolithic cured membrane thickness of 1 mm (40 mils) as determined by a standard gauge.

.4 Complete application of membrane over vertical surfaces, including previously reinforced areas, at a rate of 2.3 to 3.3 m^2/4.5 L (25 to 35 sq. ft./gal.) for poured concrete substrates [and 1.9 to 2.5 m^2/4.5L (20 to 27 sq.ft./gal.) for block walls]. Continue membrane up vertical surfaces 150 mm (6“) where detailed.

.5 For foundation walls, commence application at the top of footings, keeping the spray orifice 75 mm (3“) away from the wall. Carry the membrane up the wall to a minimum height of 150 mm (6”) above the final grade line or previously determined height.

.6 Ensure water tight seal at items penetrating membrane.

.7 Ensure continuity of building envelope air barrier.

.8 Upon completion of application, after allowing a cure time of approximately 20 minutes, depending on temperature and humidity, and while membrane is still tacky, adhere protection board [and/or insulation]. Take care to ensure proper initial placement. Do not overlap protection board.

.9 Do not commence backfill sooner than 24 hours after membrane application. Ensure that backfill material is free of debris, organic material, boulders, rocks, concrete block debris or any other deleterious material considered unsuitable fill.

SPEC NOTE: Add, as necessary, clauses pertaining to installation of insulation and filter fabric, metal flashings or other items as determined by job conditions.

3.5 FIELD QUALITY CONTROL

.1 An independent inspection and testing company appointed [and paid for by the owner] [under Cash Allowance specified in Section 01020] [will carry out inspection and testing in accordance with the General Conditions] [and Section _____].

3.6 CLEANING

.1 Clean work in accordance with Section [_____].

.2 Clean to the Consultant’s approval, soiled surfaces, spatters, and damage caused by work of this Section.

.3 Check drains to ensure cleanliness and proper function, and remove debris, equipment and excess material from the site.

3.7 PROTECTION OF FINISHED WORK

.1 Protect the finished work under provisions of Section [_____] - [_____].

.2 Do not permit adjacent work to damage work of this section.