



# PRO LIQUID FINISH™ RS

## SAND-FREE

### 2. MANUFACTURER

#### PROMA Adhesives Inc.

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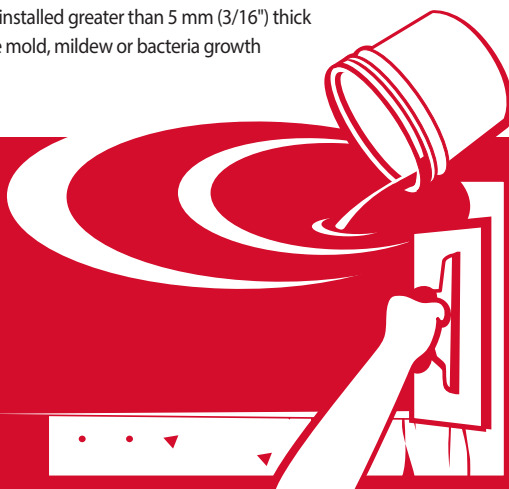
### 3. PRODUCT DESCRIPTION

PRO LIQUID FINISH™ RS is a sand-free, abrasion/scratch resistant, super-high fluidity, fast-curing, polymer-modified, calcium aluminate cement-based **hybrid product** that can be used as a self-leveling underlayment or patching compound (depending upon the amount of water added). This super-high fluidity self-leveling underlayment can either be pumped or trowel applied from 1.5 mm (1/16") up to 12 mm (1/2") in thickness. When the product is used as a self-healing patching compound, it has a longer typical pot life and can be applied from 1.5 mm (1/16") up to 12 mm (1/2") in thickness. PRO LIQUID FINISH™ RS is made with **HYDRO GEL** in its formulation to create an ultra-smooth and ultra-fine finish that requires **no sanding**. The amazing HYDRO GEL TECHNOLOGY allows the product to be used very thin as a self-leveling underlayment OR used as a self-healing, high-performance patch, depending upon the application. **The first and only product of its kind!**

### Features

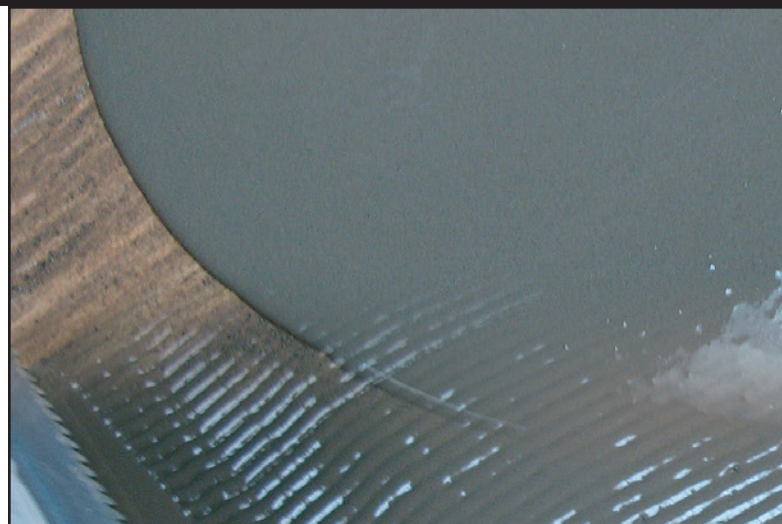
#### Product:

- ♦ SAND-FREE
- ♦ Abrasion/Scratch resistant
- ♦ Mix only with water
- ♦ For use over concrete and exterior-grade plywood surfaces
- ♦ For interior institutional, commercial and residential applications
- ♦ Qualifies as part of PROMA's LIMITED WARRANTY PROGRAM up to a LIFETIME (contact PROMA for details)
- ♦ Compatible with all setting materials, adhesives, and floor coverings including wood parquet and rubber
- ♦ Can be barrel mixed or pumped through most standard pumps
- ♦ Can be applied over substrates up to 90% RH per ASTM F2170 (water of convenience)
- ♦ Can be used as a thermal mass over hydronic and electric radiant systems
- ♦ Blocks pH when installed greater than 5 mm (3/16") thick
- ♦ Will not promote mold, mildew or bacteria growth
- ♦ No VOC



Concrete

Exterior-Grade Plywood



- ♦ Product characteristics improves indoor air quality compared to Portland cement-based products
- ♦ Eco friendly for users of the material
- ♦ Meets or exceeds ANSI A118.16 requirements
- ♦ Contributes to LEED® and WELL™ objectives and requirements
- ♦ Intertek Clean Air GOLD Certified – conformance to California Department of Public Health (CDPH) Standard Method v1.2

#### As a self-leveling underlayment:

- ♦ Creates an ultra-smooth, sand-free, level and uniform surface
- ♦ Pour from 1.5 mm (1/16") up to 12 mm (1/2") in a single application
- ♦ FAST-SETTING: install ceramic tiles, porcelain or natural stones after 3 hours, and resilient floor covering, carpet, laminate flooring, engineered wood and wood parquet after 24 hours
- ♦ Super flow properties
- ♦ Use with uncoupling membranes (no primer required)
- ♦ Use with uncoupling membranes with underfloor heating systems (no primer required)
- ♦ Meets or exceeds compression and flatness requirements ASTM F710 (Standard Practice for Preparing Concrete Floors to receive Resilient Flooring)
- ♦ Meets or exceeds compression and flatness requirements ASTM F2873 (Standard Practice for the installation of Self-Leveling Underlayment, and the Preparation of Surfaces to Receive Resilient Flooring)

#### As a patching compound:

- ♦ Ultra-smooth, ultra-fine finish – **no sanding required**
- ♦ Apply from 1.5 mm (1/16") up to 12 mm (1/2") thickness
- ♦ FAST-SETTING: install floor covering after 4 hours
- ♦ Does not re-emulsify when wet
- ♦ Self-healing properties with a longer pot life
- ♦ One step application reduces labor costs

### Packaging

22.7 kg (50 lb) plastic bag; 4.54 kg (10 lb) box



## Suitable Substrates

- ♦ Dry, completely cured concrete (at least 28 days old)
- ♦ Cement backer units (CBU)
- ♦ Gypsum and light-weight concrete surfaces<sup>†</sup> \*
- ♦ Existing ceramic and quarry tiles, porcelain, granite and marble<sup>†</sup>
- ♦ Cementitious and Epoxy Terrazzo floors<sup>†</sup>
- ♦ Exterior Grade Douglas Fir Plywood, certified CANPLY (SELECT) or (SEL-TF) CSA 121, for INTERIOR Residential Light-Duty Floors in dry areas only
- ♦ Uncoupling membranes (no primer required)\*\*
- ♦ Uncoupling membranes with underfloor heating systems (no primer required)\*\*
- ♦ Metal such as steel, copper, stainless steel, aluminum or lead<sup>†</sup>
- ♦ Old cut-back adhesive **residue** and water-soluble adhesive **residues**<sup>†</sup>
- ♦ Existing VAT and VCT tiles, and non-cushioned vinyl sheet goods<sup>†</sup>
- ♦ Homogeneous PVC flooring<sup>†</sup>
- ♦ Resin-based floor coverings (epoxy, urethane or polyurethane)<sup>†</sup>

<sup>†</sup> When primed with PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C (see respective data sheet for details)

\* Provided that the tensile bond strength of 72 psi (0.5 MPa) is reached as a minimum for self-leveling applications

\*\*Consult manufacturer of uncoupling membrane, or uncoupling membrane with underfloor heating system, for specific installation method and recommendations.

## Limitations

- ♦ For INTERIOR installations only.
- ♦ Do not use at temperatures below 10°C (50°F) or above 35°C (95°F).
- ♦ Do not use for applications exceeding 12 mm (1/2") in thickness. For installations exceeding 12 mm (1/2"), use PRO PLAN™, PRO PLAN™ CG, PRO PLAN™ SL, PRO FLOWLEVEL 40™ or PRO CEMIX™ (see respective technical data sheets for details).
- ♦ Do not apply directly over particleboard, chipboard, presswood, Lauan, masonite, OSB and other dimensionally unstable materials.
- ♦ Allow the self-leveling underlayment to dry properly prior to installing the floor covering.
- ♦ Do not leave without floor covering or exposed as a resurfacing material.
- ♦ When using a self-leveling product over a radiant heating system (previously checked for good functioning), turn the system off 24 hours prior to the installation and wait at least 2 weeks before turning it back on.
- ♦ Existing ceramic tiles, composite vinyl tiles, terrazzo, metal, epoxy-resin floors or old cut-back adhesives must be well prepared and primed with PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C prior to installing the self-leveling product (see respective technical data sheet).
- ♦ Do not use for filling cracks, holes and deep areas. Use PRO CEMIX™ for those purposes (see respective technical data sheets for details).
- ♦ Do not use where high moisture and hydrostatic conditions and/or recurring moisture problems exist.
- ♦ Do not use in places subject to immersion.
- ♦ Do not add water to the mix once it begins to thicken.
- ♦ Do not add sand, aggregate or additional water to the mix.
- ♦ Protect from any direct air ventilation or heat radiation source, such as direct sunlight, during and after the installation, for a minimum of 24 hours. These conditions could cause the self-leveling product to cure too rapidly, resulting in micro-cracking.
- ♦ Do not accelerate curing time by using ventilators or heating appliances.

## 4. TECHNICAL DATA

### Applicable Standards

**NOTE:** The technical data provided is averaged based on lab testing under controlled conditions (23° C [73° F] and 50% RH), done in accordance with standard industry testing methods (where applicable), and is subject to change without notice. Actual performance may vary depending on jobsite conditions and installation methods used. Please contact our technical services department for additional information.

### SELF-LEVELING UNDERLAYMENT (@ 28% water ratio)

PHYSICAL PROPERTIES (@23° C [73° F] and 50% RH)		
Property	Requirements ANSI A118.16	Results
Working time		≥ 30 minutes
Flow time		≥ 20 minutes
Initial flow	> 110 mm (4.33")	≥ 135 mm (5.31")
Healing	≥ 10 minutes	≥ 20 minutes
Final set time	> 20 minutes	60 - 90 minutes
Time before installing Resilient floor covering		24 hours
Time before installing ceramic tile		3 hours
Time before for secondary applications of primer and self-leveling underlayment		24 hours

MECHANICAL PROPERTIES (@23° C [73° F] and 50% RH)		
Property	ANSI A118.16 Requirements	Results
Compression strength @ 4 hours (ASTM C109)	> 6.9 MPa (1,000 psi)	≥ 8.3 MPa (1,200 psi)
Compression strength @ 28 days (ASTM C109)	> 20.7 MPa (3,000 psi)	≥ 34.5 MPa (5,000 psi)
Tensile bond strength [Concrete] @ 24 hours (ASTM D4541)	> 0.5 MPa (72.5 psi)	≥ 0.7 MPa (101.5 psi)
Tensile bond strength [Concrete] @ 7 days (ASTM D4541)		≥ 2.2 MPa (319 psi)
Tensile bond strength [Concrete] @ 28 days (ASTM D4541)	> 1.0 MPa (145 psi)	≥ 3 MPa (358 psi)
Flexural strength @ 28 days (ASTM C-348)		≥ 7.9 MPa (1,150 psi)
Wet density		1.9 g/mL
Abrasion resistance Taber H22 wheel, 500 g, 200 cycles, speed 60, 28 days		1.26% total weight loss
Shore D Test (ASTM D2240) @ 48 hours and 28 days		71 - Extra Hard
VOC content		0 g/L
Linear shrinkage (%) @ 28 days		< 0.075%

### PATCHING COMPOUND (@ 23% water ratio)

PHYSICAL PROPERTIES (@23° C [73° F] and 50% RH)		
Property	Requirements	Results
Working time		≥ 30 minutes
Final set time		< 90 minutes
Time before installing Resilient floor covering		> 4 hours

MECHANICAL PROPERTIES (@23° C [73° F] and 50% RH)	
VOC content	0 g/L
Linear shrinkage (%) @ 28 days	< 0.060%
Compression strength (ASTM C-109) @ 28 days	> 41.4 MPa (6,000 psi)
Density	1.9 g/mL





## PRODUCT

Shelf life	
22.7 kg (50 lb) plastic bag	12 months if kept in its original unopened packaging and stored in a dry location.
10 kg (22 lb) box	6 months if kept in its original unopened packaging and stored in a dry location.

Approximate coverage		
Thickness	Per 4.54 kg (10 lb) box	Per 22.7 kg (50 lb) bag
1.5 mm (1/16")	2.2 m² (24 ft²)	11.1 m² (120 ft²)
3 mm (1/8")	1.1 m² (12 ft²)	5.6 m² (60 ft²)
6 mm (1/4")	0.56 m² (6 ft²)	2.8 m² (30 ft²)

## 5. INSTALLATION

### Surface Preparation

(Refer to PROMA Surface Preparation Guidelines for complete details)

**Note:** PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C can be used to ready nearly any surface for PROMA leveling underlayments without the need for scarifying or shotblasting, saving valuable time and money (see respective technical data sheet for details).

- All supporting surfaces must be structurally sound, solid and stable.
- Surfaces must be clean and free of dust, oil, grease, paint, tar, wax, curing agent, primer, sealer, form release agent or any deleterious substance and debris which may prevent or reduce adhesion.
- Acids, concentrated alkaline conditions and cleaning chemical residues must be neutralized or removed.
- All concrete substrates must be completely cured (at least 28 days old), solid, sound, slightly textured and have a direct tensile cohesive strength greater than 1.2 MPa (175 psi) when tested in accordance with ACI 503 R – (Appendix A) procedure.
- On grade or below grade concrete slabs must be installed over an effective vapor barrier.
- All concrete substrates must be dry and free of hydrostatic conditions and/or extreme moisture problems. Perform a calcium chloride moisture emission test (ASTM F-1869) on the concrete substrate before proceeding with the installation of the floor. For wood flooring and resilient floor covering installations, the moisture vapor emission of the concrete must not exceed 1.36 kg per 93 m² (3 lb per 1,000 sq. ft.) per 24 hours. Do not prime, repair, level or patch the substrate, or install any floor covering materials until moisture problems and conditions have been addressed to meet these requirements. **Please contact our Technical Service Department for appropriate recommendations.**
- Existing Gypsum and light-weight concrete surfaces must be properly primed with PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C (see respective technical data sheet for details).

- Smooth concrete substrate surfaces must be either PRIMED with PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C primer **OR** mechanically roughened in accordance with an engineer-approved procedure (shot-blasting, scarification, grinding, sand or water-blasting, etc) to provide sufficient surface texture and profile for the adequate bonding of the subsequent leveling product. Then, **PRIMED** with PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C (see respective technical data sheet for details).
- If concrete is dry and porous, **it must be primed** with PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C primer (see respective technical data sheet for details) to prevent an uncontrolled absorption of water out of the self-leveling mix and also to avoid formation of air bubbles on the surface (see respective technical data sheet for details).
- Existing concrete slabs with old cutback adhesive or carpet adhesive **residues** must be scraped, roughened, cleaned, properly prepared and **PRIMED** prior to the application of the self-leveling underlayment. (Refer to the Surface Preparation Guidelines and PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C technical data sheet for full details or contact our Technical Service Department for appropriate recommendations).
- Wood substrate must be solid and well-supported by joists spaced 400 mm (16") apart and should consist of two superimposed plywood sheet layers, each 16 mm (5/8") thick and set with a minimum of 3 mm (1/8") gap spacing between panels and 6mm (1/4") gapping along the perimeter walls, around columns, posts, drains and pipe openings. The top underlayment plywood layer must be fastened with non-oxidizing floor screws at every 15 cm (6") along panel edges and each way throughout the panel at 20 cm (8") centers. Floor surfaces along adjacent edges of panels must not be more than 0.75 mm (1/32") above or below each other. For ceramic and porcelain tiles up to 30 x 30 cm (12" x 12"), the structural design of the substrate must not allow a deflection greater than L/360 when tested to 136 kg (300 lb) concentrated loads in accordance with ASTM C627 Standard test method. For square and rectangular tiles with one edge dimension 38 cm (15") and 45 cm (18") up to 58 x 58 cm (23" x 23") the maximum deflection should not exceed L/540 unless an effective CIM (crack isolation membrane) is used in the installation system. **For tiles 60 x 60 cm (24" x 24") or larger and for ALL dimension stone installation, the maximum deflection must not exceed L/720. (Refer to ANSI A108.01 requirements for Plywood sub-floors)**
- Existing ceramic tile, VCT or hard to bond to surfaces should be PROPERLY PREPARED, CLEANED and PRIMED with PROMA's PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C primer prior to the application of the self-leveling underlayment. (Refer to the Surface Preparation Guidelines and PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C technical data sheet for full details or contact our Technical Service Department for appropriate recommendations)

**Notes:** Scrape off as much as possible of the old cut-back adhesive.

Do not use sweeping compounds. This could leave an oily film on the concrete surface that will prevent a proper bond.

## PRO SUPERPRIME™

PROMA has engineered a revolutionary primer that can ready nearly any surface for PROMA leveling underlayments without the need for scarifying or shotblasting. Use PRO SUPERPRIME™ or PRO SUPERPRIME™ 1C with PRO LIQUID FINISH™ RS as an unbeatable system for preparing a substrate for flooring installation. Surface must meet a minimum of 0.5 MPa (72 psi) tensile bond strength. In areas subject to heavy traffic, a minimum of 1.2 MPa (175 psi) tensile bond strength is required (see respective technical data sheet for details).





## Mixing

As a self-leveling underlayment:

**Mixing Ratio: 3 parts powder to 1 part water (by volume)**

1. Use clean mixing-tools and containers.
2. In a clean mixing container, measure and pour **6.25 to 6.45 L (6.7 to 6.8 quarts / 1.65 to 1.7 US gal)** of cool clean water and gradually add 22.7 kg (50 lb) PRO LIQUID FINISH™ RS, or pour **1.25 to 1.31 L (1.3 to 1.4 quarts / 0.33 to 0.35 US gal)** of cool clean water and gradually add 4.54 kg (10 lb) of PRO LIQUID FINISH™ RS powder mix, while mixing slowly.
3. Using a clean low-speed mechanical mixer (150 - 300 rpm), mix until a homogeneous, smooth, lump-free, consistency is achieved.
4. The product is now ready for setting.
5. Use the product within the shortest possible delay (within a few minutes).

As a patching compound:

**Mixing Ratio: 3 2/3 parts powder to 1 part water (by volume)**

1. Use clean mixing-tools and containers.
2. In a clean mixing container, measure and pour **5.3 L (5.6 quarts / 1.4 US gal)** of cool clean water and gradually add 22.7 kg (50 lb) PRO LIQUID FINISH™ RS, or pour **1.06 L (1.1 quarts / 0.28 US gal)** of cool clean water and gradually add 4.54 kg (10 lb) of PRO LIQUID FINISH™ RS powder mix, while mixing slowly.
3. Using a clean low-speed mechanical mixer (150 - 300 rpm), mix until a homogeneous, smooth, lump-free, consistency is achieved.
4. The product is now ready for setting.
5. Use the product within the shortest possible delay (within a few minutes).

## Application

**Note: Protect from any direct air ventilation or heat radiation source, such as direct sunlight, during and after the installation.**

As a self-leveling underlayment:

1. Pour the self-leveling mix on the substrate and help spread it in place with a trowel or squeegee or by continuous pumping.
2. The mix will level itself out while leaving a smooth finish.

**For more detailed information on ways to apply this product (especially when a pump process is being used), please contact our technical department for proper recommendations and job field assistance.**

**When poured over an uncoupling membrane with underfloor heating system:**

Certain manufacturers of uncoupling membranes with underfloor heating systems allow the installation of alternative flooring (other than tile) by creating a thermal mass with a self-leveling product, such as PRO LIQUID FINISH™ RS. The thermal mass must be a thickness between 6 to 12 mm (1/4" to 1/2"); refer to heating system manufacturer's technical data sheet for additional information. For projects greater than 23 m² (250 sq. ft.), please contact our technical department for proper recommendations.

As a patching compound:

1. Spread PRO LIQUID FINISH™ RS immediately after mixing with the flat side of a trowel to the desired texture and finish.
2. Do not mix more material than can be used in a 30 minute period.
3. Do not add any water once the mixture has hardened.

**Note: All expansion and control joints must be carried through from substrate to final flooring and filled with an industry-approved flexible sealant in accordance with ANSI A108.01 norm and TCNA detail EJ171 or TTMAC detail 301MJ. Do not fill or cover expansion and control joints with installation material. Contact PROMA's technical department for additional information.**

## Curing and Protection

- ♦ 3 hours at room temperature (foot traffic).
- ♦ Install ceramic tiles, porcelain or natural stones after 3 hours.
- ♦ Install resilient floor covering, carpet, engineered wood and wood parquet after 24 hours (when used as a self-leveling underlayment) or 4 hours (when used as a patching compound in thin application).
- ♦ Material should be completely dry prior to applying the floor covering adhesive.

**Note: Drying time may vary depending on the temperature and humidity level. Do not attempt to accelerate drying and curing through forced ventilation, fans or heat-blenders.**

- ♦ Ensure that the moisture vapor emission of the concrete does not exceed 1.36 kg per 93 m² (3 lb per 1 000 sq. ft.) per 24 hours when tested in accordance with the calcium chloride moisture emission test (ASTM F-1869) prior to the installation of a resilient floor covering or other material sensitive to water.
- ♦ Protect from traffic and dust until floor covering is completely installed.

## Cleaning

Clean tools and hands with water while the mortar is still fresh.

## Health and Safety

Refer to the Material Safety Data Sheet (MSDS) for complete details.

## 6. AVAILABILITY AND COST

PROMA products are widely available in Canada and the Northeast United States. To find a distributor of PROMA products, call **toll-free: 1.866.51.PROMA (77662)**.

## 7. WARRANTY

PROMA warrants that this product is manufactured using quality raw materials and is of merchantable quality and suitable for the purpose for which it was intended. PROMA's liability under this warranty shall be limited to the replacement of its product proven to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising from the use of/or the inability to use this product.

**PRO LIQUID FINISH™ RS qualifies as part of PROMA's LIMITED WARRANTY PROGRAM up to a LIFETIME, the whole subject to the terms and conditions of the applicable warranty program. This limited program applies to specific individual PROMA products when used together as a complete system. A combination of qualifying PROMA products must be properly used for each stage of preparation, installation, and finishing to be eligible for this limited warranty program. Visit [www.proma.ca](http://www.proma.ca), or contact PROMA by phone (toll-free: 1 866.51.PROMA [77662]) or by email ([info@proma.ca](mailto:info@proma.ca)) for complete terms and conditions.**

## 8. MAINTENANCE

Product requires no special maintenance. Do not leave without floor covering or exposed as a resurfacing material.

## 9. TECHNICAL SERVICE

For more detailed information on this product, please contact our technical department for proper recommendations and job field assistance. **Toll-free: 1.866.51.PROMA (77662)**.

## 10. FILING SYSTEM

Additional information is available upon request, or by visiting [www.proma.ca](http://www.proma.ca).

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