



PRO SET SF ^{SAG-SLUMP RESISTANT} UNIVERSAL™

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

PRO SET SF UNIVERSAL™ is a high-quality, ultra-creamy, single-component, specially formulated **sag-slump resistant** unmodified thin-set mortar for large-format and heavy tile and stone. PRO SET SF UNIVERSAL is also suitable for the installation of porcelain tile when used in conjunction with the SCHLUTER System products. 

Features

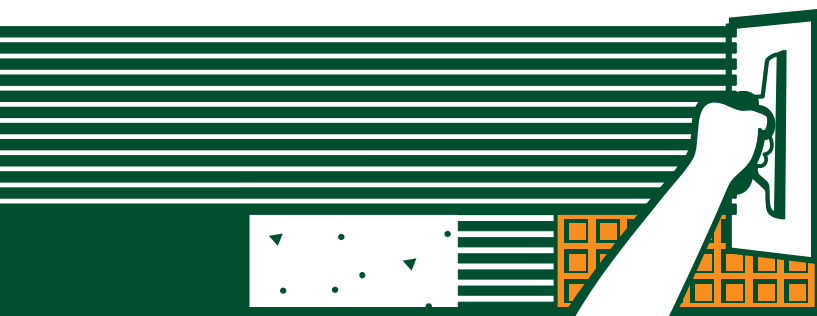
- ♦ For **sag-slump resistant** wall, floor and countertop installations of large-format and heavy tile and stone
- ♦ For setting large-format non-vitreous, semi-vitreous, vitreous ceramic tile, pavers and quarry tiles
- ♦ For setting most marble, granite and natural stone (see LIMITATIONS)
- ♦ For setting porcelain tiles when used in conjunction with SCHLUTER system products , such as DITRA uncoupling membrane and KERDI waterproofing membrane
- ♦ For installing SCHLUTER membranes over concrete and gypsum wallboard
- ♦ For INTERIOR installations
- ♦ For institutional, commercial and residential floor and wall applications
- ♦ Meets or exceeds ANSI A118.1 T requirements when mixed with water
- ♦ Contributes to LEED objectives and requirements

Packaging and Colors

22.7 kg (50 lb) bag; 11.34 kg (25 lb) bag, grey and white





(Schluter®-DITRA not included.)



Concrete

Schluter®-DITRA

Suitable Substrates

- ♦ Dry, completely cured concrete (at least 28 days old)
- ♦ Concrete and masonry blocks
- ♦ Cement backer units (CBU)
- ♦ Cementitious screeds, rendering, leveling coats and mortar beds
- ♦ Gypsum wallboard (INTERIOR dry areas only)
- ♦ Schluter DITRA uncoupling membranes 
- ♦ Schluter KERDI waterproofing membrane 

DITRA is a registered trademark of Schluter®-Systems KG. Use of this trademark by PROMA is permitted by Schluter®-Systems.





Limitations

- ♦ For setting EXTRA-LARGE / EXTRA-THIN units (above 24" x 24" [60 x 60 cm] and less than 3/16" [5 mm] thickness), please contact our Technical Service Department for appropriate recommendations.
- ♦ Do not use at temperatures below 10°C (50°F) or above 35°C (95°F).
- ♦ Do not apply directly over plywood, particleboard, chipboard, presswood, Luan, masonite, OSB, Gypsum-based leveling and patching compounds and all dimensionally unstable or non-recommended substrate materials.
- ♦ Do not use for the installation of green marble and other moisture sensitive stones that react to standard cement mortars and setting materials containing water. Instead, for setting these stones, use **EXCLUSIVELY** PRO GROUT XTREME™ or PRO SEAL & SET™ 100 NS (see the respective technical data sheet). For the installation of white, pastel or translucent marble, use only White PRO SET SF UNIVERSAL.
- ♦ Do not use for installing glass tiles. For such installation, set tiles instead with PRO HPX™ or PRO SUPERLITE™ MORTAR (see respective technical data sheets for more details). **Note:** If the glass tile has an epoxy finish backing and no synthetic mesh, set tiles exclusively with PRO GROUT XTREME™ White (see respective technical data sheet).
- ♦ Do not use for installations submitted to prolonged water contact, immersion or high humidity level (e.g. pools, gang showers, fountains, steam rooms, spas, etc.) In such cases, set tiles instead with a mixture of PRO BOND and PRO BOND PLUS additive, or PRO QUICK and PRO QUICK PLUS additive, or PRO HPX™ (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 for installing porcelain tiles unless used with SCHLUTER System products.

NOTICE: Consult the uncoupling membrane manufacturer for suitability for exterior applications.

4. TECHNICAL DATA

Applicable Standards

For Additional Information, please refer to the most recent TCNA handbook for ceramic tile installation or the TTMAC Specification Guide 09 30 00 Tile Installation Manual, or visit our website at www.proma.ca.

WORKING PROPERTIES (@23° C [73° F] and 50% RH)	
Pot life	≥ 1 hour
Open time	≥20 minutes
Initial cure	18-24 hours
Final cure	28 days
Adjustability	35-45 minutes

PHYSICAL PROPERTIES (@23° C [73° F] and 50% RH)		
VOC content	0 g/L	
ANSI A118.1T – VERTICAL SLIP RESISTANCE		
Specification	Results	
≤ 0.02" (0.5 mm)	PASSED	
Shear strength per ANSI A118.1 tests (at 7 days)		
Test	Specification	Results
Glazed wall tiles	> 200 psi (1.38 MPa)	> 250 psi (1.72 MPa)
Porcelain tiles	> 150 psi (1.03 MPa)	> 200 psi (1.38 MPa)
Approximate coverage per 22.7 kg (50 lb) bag		
Notched trowel	Coverage	
6 x 10 x 6 mm (1/4" x 3/8" x 1/4")	65 ft² (6.0 m²)	
12 x 12 x 12 mm (1/2" x 1/2" x 1/2")	40 ft² (3.7 m²)	
19 x 14 x 10 mm (3/4" x 9/16" x 3/8") U-notch trowel	35 ft² (3.2 m²)	
When used underneath Schluter® membranes		
Notched trowel	Coverage	
6 x 5 mm (1/4" x 3/16") V-notch trowel	150 ft² (13.9 m²)	
When used over Schluter®-KERDI to bond tiles		
Notched trowel	Coverage	
6 x 10 x 6 mm (1/4" x 3/8" x 1/4")	52 ft² (4.8 m²)	
12 x 12 x 12 mm (1/2" x 1/2" x 1/2")	37 ft² (3.4 m²)	
19 x 14 x 10 mm (3/4" x 9/16" x 3/8") U-notch trowel	33 ft² (3.0 m²)	
When used over Schluter®-DITRA uncoupling membrane to bond tiles		
Notched trowel	Coverage	
6 x 10 x 6 mm (1/4" x 3/8" x 1/4")	42 ft² (3.9 m²)	
12 x 12 x 12 mm (1/2" x 1/2" x 1/2")	30 ft² (2.8 m²)	
19 x 14 x 10 mm (3/4" x 9/16" x 3/8") U-notch trowel	27 ft² (2.5 m²)	
When used over Schluter®-DITRA XL uncoupling membrane to bond tiles		
Notched trowel	Coverage	
6 x 10 x 6 mm (1/4" x 3/8" x 1/4")	32 ft² (3.0 m²)	
12 x 12 x 12 mm (1/2" x 1/2" x 1/2")	24 ft² (2.2 m²)	
19 x 14 x 10 mm (3/4" x 9/16" x 3/8") U-notch trowel	22 ft² (2.0 m²)	
Shelf life		
12 months if kept in its original unopened packaging and stored in a dry location.		



5. INSTALLATION

Surface Preparation

(Refer to PROMA Surface Preparation Guidelines for complete details)

Note: PRO SUPERPRIME 1C™ or PRO SUPERPRIME™ can be used to ready nearly any surface for PROMA setting materials 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, stable, level, plumb and true.
- ♦ 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) and slightly textured.
- ♦ 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.
- ♦ 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 (shotblasting, scarification, grinding, sand or waterblasting, etc) to provide sufficient surface texture and profile for adequate bonding of the product.
- ♦ For ceramic and porcelain tiles up to 30 x 30 cm (12" x 12"), the structural design of the wood 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.**

Note: Do not overheat floors or basement during cold season construction. These conditions could cause the product to cure too rapidly and affect its performance.

Mixing

Mixing ratio:

2 1/2 parts powder to 1 part water when used to fill Schluter®-DITRA membrane cavities and for tile installation;

2 parts powder to 1 part water when used under Schluter®-KERDI and DITRA membranes

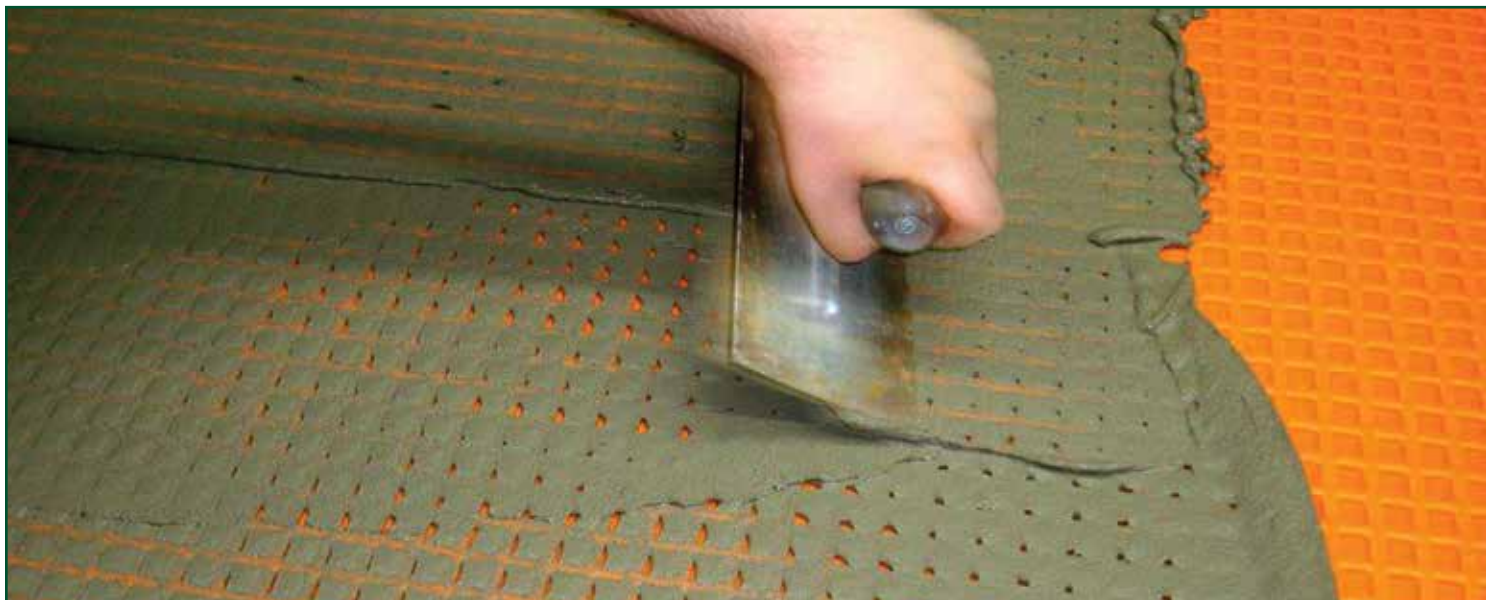
1. Use clean mixing-tools and containers.
2. In a clean mixing container, measure and pour **5.7 L (6 quarts / 1.5 US gal)** of cool clean water (to fill Schluter®-DITRA membrane cavities and for tile installation) and gradually add 22.7 kg (50 lb) of PRO SET SF UNIVERSAL powder mix, while mixing slowly. **Note:** For application underneath Schluter - KERDI and DITRA membranes, measure and pour up to 7.2 L (7.6 quarts / 1.9 US gal) of cool clean water and gradually add the powder mix, while mixing slowly.
3. Using a low-speed mechanical mixer (150 - 300 rpm), mix until a homogeneous, smooth, lump-free, consistency is achieved.
4. Let the mortar sit approximately 10 minutes; remix without adding any more water or powder-mix.
5. The product is now ready for setting.
6. During the setting, keep the mortar-mix fresh & smooth by periodically re-stirring the inside of the bucket without ever adding water.
7. Clean tools and hands with water while the mortar is still fresh.

Note: PRO SET SF UNIVERSAL mixed with water is an unmodified thin-set mortar conforming to ANSI A118.1, meeting the requirements set out in the Schluter®- DITRA Installation Handbook to set ceramic and stone tile on Schluter®-DITRA. When using PRO SET SF UNIVERSAL in conjunction with Schluter®-DITRA, the details in the Schluter®-DITRA Installation Handbook must be followed.

Application

When used underneath Schluter® KERDI/DITRA membranes

1. Pressure-apply the mortar with the flat edge of the recommended notched-trowel to promote a positive bond and completely cover the substrate.
2. Immediately as you go and before skinning or drying occurs, apply a sufficient mortar layer and, using the appropriate notched side of the trowel, ridge in a straight-line directional pattern to achieve an even setting bed. For walls, maintain ridges running in a horizontal directional pattern.
3. Do not spread more mortar than can be covered with tiles within 20 minutes.
4. If the mortar dries or skins-over, it must be removed and replaced with fresh mortar.
5. Place the membrane into the mortar and pressure-apply to achieve proper mortar contact and transfer.





When used over Schluter® KERDI/DITRA membranes and for tile installation

1. Pressure-apply mortar with the flat edge of the recommended notched-trowel and completely fill cavities of the membrane to promote a positive bond prior to installing tile.
2. IMMEDIATELY AS YOU GO (without delay) and before skinning or drying occurs, apply a sufficient mortar layer and, using the notched side of the trowel, ridge in a straight-line directional pattern to achieve an even setting bed. For walls, maintain ridges running in a horizontal directional pattern. **For floors, it is highly recommended to back-butter each individual large-format tile completely with fresh mortar and to apply them without delay over the freshly-applied ridged mortar bed to ensure proper transfer.**
3. Do not spread more mortar than can be covered with tiles within 20 minutes.
4. If the mortar dries or skins-over, it must be removed and replaced with fresh mortar.
5. Place tiles firmly with a slight back and forth motion across ridges and tamp tiles repeatedly to achieve at least an 85% mortar contact with the tile back (95% in wet areas, commercial floors and 100% for natural stone installation).
6. Tiles should be embedded in the mortar to at least 1/3 of their thickness.
7. Remove excess mortar from grout space and wipe-off blotches and smears immediately while mortar is fresh.

Expansion and Control Joints

- ♦ Install control joints where tiles abut restraining surfaces, around the perimeter of the work and at the base of columns and curbs.
- ♦ Install and space expansion and control joints in all directions in accordance with TCNA HANDBOOK FOR CERAMIC TILE INSTALLATION Detail #EJ-171 recommendations, or TTMAC Specification Guide 09 30 00 Detail #301-MJ recommendations. CAUTION: DO NOT cut EXPANSION JOINTS in after the tiles have been installed. Install tiles normally and stop when the control joint location is reached. Cut the tile if required and resume setting from the opposite side of the joint. Before proceeding further, rake the joint and leave the tile and joint space clean.
- ♦ DO NOT FILL EXPANSION JOINT SPACE UNTIL GROUTING IS COMPLETED on the remainder of the job.
- ♦ Install a suitable industry-approved compressible bead and flexible sealant to caulk expansion and control joints. Follow the sealant manufacturer's installation instructions.

Curing and Grouting

- ♦ Do not step on floors and protect area from foot traffic for at least 24-48 hours, depending on temperatures and humidity conditions.
- ♦ Protect walls from water contact, impact and vibration for at least 24 hours.
- ♦ Allow at least 24 hours from installation before grouting tiles.

Note: Extended protection and downtime requirements before grouting may be required depending on temperature and humidity conditions and on the porosity and size of the tile or stone being installed.

Cleaning

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

Health and Safety

Refer to the Safety Data Sheet (SDS) 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.

8. MAINTENANCE

Product requires no special maintenance.

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.

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