CONCRETE SURFACE PREP GUIDE

Proper surface preparation is extremely important to the successful application of any and all repair products. Bond is only as good as the surface to which it is bonded too. Proper preparation of the surface is critical for long term durability. Proper surface preparation of concrete involves 6 basic steps:

Contamination Removal: Grease, wax, oil or various sealers will impair proper bond of a repair material. For thinner repairs where the surface preparation technique may involve little removal of the substrate, contamination removal may be necessary. Presence of such contamination may be determined by dropping a small amount of water or diluted muriatic acid onto the substrate and watching whether the droplets are absorbed or a reaction occurs. No reaction indicates that contaminants are present. If oil has penetrated into the concrete surface, it may be detected by raising the temperature of a small area to about 150° F with a heat lamp. Presence of the contamination is indicated if oil appears or the area becomes greasy to the touch. Typically contamination removal would include scrubbing with envirosol available from Masons Supply or some other industrial degreasers.

Edge Conditioning: Products being applied in thickness greater than 1/4", or where significant contamination of the concrete exists, requires edge conditioning. Square cutting of the edges using a concrete saw is the most common method.

Bulk Removal: Various methods may be employed to remove delaminated or disintegrated concrete down to the level of sound substrate. Chipping is the most common technique. Use of a square tip chisel is recommended. Other methods used include hydro-demolition, scabbling, rotomilling and other mechanical means. Some of these techniques, such as hydro-demolition, may include the final three steps of surface preparation.

It is important to select a method that is aggressive enough to get the job done but not so aggressive as to damage the sound concrete. The following methods may be used as preparation for products being applied in thinner sections or where the substrate is not severely damaged. These methods are ranked according to preference:

Shot blasting: This is the preferred method for removal of thinner sections of concrete. Follow mechanical cleaning with vacuum cleaning.

Sandblasting: Aggressive sandblasting may be used in place of shot blasting for some applications. Use the same procedure as shot blasting, however greater care during clean up will be necessary.

Water blasting: High-pressure water blasting using pressures over 8,000 psi may be sufficient for some applications. Thorough rinsing of the substrate to remove wetted laitance is necessary. Water blasting with pressures below 8,000 psi is insufficient for most applications.

Undercutting: Where significant corrosion of the reinforcing steel has occurred, undercutting of this reinforcement should take place. Refer to ICRI “Guideline for Repair of Deteriorated Concrete due to Reinforcing Steel Oxidation” for this and the following section. Undercutting a minimum of ¾” behind the rebar is recommended.

Cleaning and Repair of Reinforcing Steel: If the exposed reinforcing steel in the patch has corroded it should be cleaned using a sandblaster/water blaster in accordance with commercial blast cleaning standards. In case where the rebar has lost more than 25% of its original cross section, a new rebar piece should be spliced to the old in accordance with ACI 318-83. Significant damage to reinforcement should be reviewed with a licensed professional engineer.

Surface Cleaning of Concrete: The final and often the most important step of surface preparation is the surface cleaning of the concrete. All loose particles and dust must be removed prior to placement of the patching material. This is best done with a pressure washer using water at approximately 3,000 psi. The water jet gives the concrete an uncontaminated, bondable surface.

Pre-dampening the Substrate: All cementitious materials (with the exception of Set 45) should have the substrate pre-dampened with potable drinking water. A saturated surface dry (SSD) condition is required. Any puddle areas should be brushed away or blown off using oil free compressed air.

Bond Slurry Coat: With the exception of Set 45, a bond coat slurry is recommended for achieving better bond with all cementitious products. To make a slurry coat, use a small amount of each batch mixed to a slightly wetter consistency. Thoroughly scrub a bond coat into the substrate with clean, wet, stiff broom or brush immediately ahead of the mortar placement. Do not apply more bond coat than can be covered with mortar before the bond coat dries.

The above recommendations are applicable for most applications; however refer to data sheets, installation guidelines, and bag or label instructions for recommendations for each specific product.
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**Applications:**
- Repair rutted concrete, repairing rain/freeze damage or unlevel floors.
- Fast setting patching materials.

**Type of Traffic:**
- Pedestrian traffic: Trowel applied, express repair.
- Tire traffic: Self-leveling underlayments, wear surfaces.
- Light section: Concrete toppings, fast cure.
- Heavy duty: Trowel applied express repair.

**Condition:**
- Interior only: Self-leveling underlayments, wear surfaces.
- Exterior use: Trowel underlayments, wear surfaces.
- Primed: Heavy duty concrete, steel wheels.
- Fast cure: Express repair materials.

**Products:**
- TAM SLU, TAMMS SLU, PCR SFC, SUPER FLOWCRETE, PCR PCP, RA R25, RAECO R 25, TAM TP, EMERY TUFF TOP, THIN TOP SUPREME, THIN PATCH, MASCOPATCH, CONCRETE TOP SUPREME, PATCHCRETE, MS MP, EU MP, EUCOSPEED MP, VERSASPEED LS, ETT EMERY TUFF TOP, PATCHCRETE ADMIX, THIN PATCH, SUPER COMPO, REG CURE, FLOOR COVERINGS.

**Testing:**
- All testing performed at 72°F.

**Note:**
- The chart should be considered a guide only.
- Consult specifications sheets for complete technical, installation, and surface prep procedures.
- Repairing rutted concrete, roadways, and/or unlevel floors.
- Fast setting patching materials.
- Heavy duty traffic: Trowel applied, express repair, concrete toppings, pneumatic reg cure, min 3/4" (Emery Tuff Top / J 58 epoxy bond, steel wheel).
- Pedestrian traffic: Trowel applied, reg cure, min 1/8" (Patchcrete / Patchcrete admix, thin top supreme).
- Tire traffic: Self-leveling, reg cure, min 1/4" (Super Flowcrete / P 100 primer, interior only).
- Fast cure: Express repair materials.
- Underlayments: Floor coverings, trowel applied, reg cure, min 3/8" (Concrete Topping Supreme, wear surface, tire traffic).

**Recommendations:**
- Consult specifications sheets for complete technical, installation, and surface prep procedures.
- Repairing rutted concrete, roadways, and/or unlevel floors.
- Fast setting patching materials.
- Heavy duty traffic: Trowel applied, express repair, concrete toppings, pneumatic reg cure, min 3/4" (Emery Tuff Top / J 58 epoxy bond, steel wheel).
- Pedestrian traffic: Trowel applied, reg cure, min 1/8" (Patchcrete / Patchcrete admix, thin top supreme).
- Tire traffic: Self-leveling, reg cure, min 1/4" (Super Flowcrete / P 100 primer, interior only).
- Fast cure: Express repair materials.
- Underlayments: Floor coverings, trowel applied, reg cure, min 3/8" (Concrete Topping Supreme, wear surface, tire traffic).
SELF LEVELING UNDERLAYMENT

SLU
Description: A cement-based underlayment formulated to level floors and provide a sound surface for floor coverings. Self smoothing. Yields a smooth and hard surface. Properties similar to concrete. Pump or pour application.

Application: Repair, fill and level surfaces. Interior use over properly prepared concrete substrates.

Thickness Per Lift:
½"–1" neat
1½"–2" extended

Coverage: One 50 lb. bag yields approximately 0.42 ft³ and covers 25 ft² at ½" thickness. For applications over 1", extend with 15 lbs. of clean washed ⅜" pea gravel. Yield will be increased to approximately .50 ft³.

Hornweld Primer: Prime concrete with Hornweld—covers approximately 200 ft².

Specifications:
Application Life: 75° F
Set Time (ASTM C-191):
Initial 1–2 hrs
Final 3–4 hrs
Compressive Strength (ASTM C-109):
1 day 1,500 psi
3 days 2,440 psi
7 days 3,800 psi
28 days 4,400 psi
Tensile Strength (ASTM C-190):
7 days 400 psi
28 days 680 psi
Flexural Strength (ASTM C-78):
7 days 450 psi
28 days 675 psi

No. Size
TAM SLU 50 lb. bag, 48/pallet
Primer:
TAM 1GWELD 1 gal. pail, 6/case, 60 lbs.
TAM SGWELD 5 gal. pail, 50 lbs., 36/pallet

Super Flowcrete
Description: A technically advanced portland cement based material which is self-leveling, self-drying and will perform very well as an interior finished floor, wearing surface or underlayment. It is a 1 component, polymer modified scientific blend of cements, select graded silica and special additives. Self-drying through an internal chemical reaction which uses the water not needed for hydration. Gives a smooth, flat, finished floor which is suitable for quick application of floor coverings or use as a finished wearing surface. Consult data sheet for more information.

Application: Designed to be used as a self-leveling wearing surface topping, underlayment or decorative finished floor. Easy to apply and provides a smooth, tough, finished floor. Use it as a new floor or for floor repairs in light manufacturing facilities. Suitable for rubber tire forklift traffic. Also designed to be used as an interior decorative floor for retail, hotels, restaurants and similar applications. Integral concrete colors and stains may be used to make decorative patterns and designs.

Thickness Per Lift:
Underlayment: 0–2"
Wearing surface: ⅛"–2"

Specifications:
Application Life: 75° F
Set Time (ASTM C-191):
Initial 10–12 min
Final 49 min
Compressive Strength (ASTM C-109):
1 day 2,600 psi
3 days 3,900 psi
7 days 5,300 psi
28 days 6,100 psi
Flexural Strength (ASTM C-348):
28 days 1,360 psi
Bond Strength (ASTM C-1042):
28 days 935 psi
Coverage:
Super Flowcrete: One bag yields approximately .45 ft³ and will cover 45 ft² at ⅛" thickness. For applications over 1", extend with 15 lbs. clean washed ⅜" pea gravel. Yield will be increased to approximately .55 ft³.
P-100 Primer: Prime concrete with P-100 mixed 1:1 with water covers approximately 300 ft².

No. Size
PCR SFC 45 lb. bag, 70/pallet
Primer:
PCR 1G100 1 gal. pail, 4/case, 40 lbs.

Read manufacturers’ data sheets for complete specifications, installation procedures, and MSDS precautions.
Warning: Chronic health effect possible—inhalation of silica dust may cause lung injury/disease (Silicosis). Take appropriate measures to avoid breathing dust. See page 164-165 for more information.
R-25
Description: A polymer modified, cement based compound that is formulated for patching and repairing concrete and masonry. Features and benefits include single component, polymer modified; trowelable repair mortar; featheredge to 1"; high durability; outstanding bond strength; high strength; and user friendly.

Application: Use inside for underlayment. Trueing up rained out slabs or freeze damaged slabs. Leveling, or creating pitch for drainage, filling holes, cracks, spalled areas, tile grout, etc.

Thickness Per Lift:
0–½" neat
½"–1" extended

Applicable Standards: USDA Approval.

Specifications:
- Temperature: 72°F
- Application Life: 30 min
- Set Time (ASTM C-266):
  - Initial: 60 min
  - Final: 120 min
- Compressive Strength (ASTM C-109):
  - 1 day: 500 psi
  - 7 days: 1,400 psi
  - 28 days: 2,000 psi
- Flexural Strength (ASTM C-256):
  - 28 days: 1,600 psi
- Tensile Strength (ASTM C-190):
  - 28 days: 750 psi
- Slant Shear Bond Strength (Dow test method):
  - 28 days: 600 psi

Coverage: One 45 lb. bag of R-25 Powder and 1 ⅔ gal. of R-25 Latex Binder covers approximately 45 ft² at a ⅛" thickness (yields approximately .469 ft³).

No. | Size |
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RA R25 | 45 lb. bag, 40/pallet |
RA 5GR25 | 5 gal. liquid, 50 lbs., 24/pallet |
RA 50GR25 | 50 gal. liquid, 550 lbs. |

Thin Patch®
Description: A fine textured latex mix designed for a variety of applications. It is a 2 part product—a blend of various fine cementitious powders and aggregates and latex. When mixed together and applied, some of the latex penetrate into the surface that has been applied. As the mix hardens, the latex particles throughout the mix adhere to each other. The result is a high strength patch that has bonded itself to the concrete surface.

Application: Use inside for underlayment. Trueing up rained out slabs or freeze damaged slabs. Leveling, or creating pitch for drainage, filling holes, cracks, spalled areas, tile grout, etc.

Thickness Per Lift:
0–1" neat

Applicable Standards: USDA Approval.

Specifications:
- Temperature: 75°F
- Application Life: 20 min
- Set Time (ASTM C-266):
  - Initial: 30–50 min
  - Final: 1–2 hrs
- Compressive Strength (ASTM C-109):
  - 7 day: 500 psi
  - 28 day: 1,000 psi
- Flexural Strength (ASTM C-256):
  - 28 day: 1,600 psi
- Tensile Strength (ASTM C-190):
  - 28 day: 750 psi
- Slant Shear Bond Strength (Dow test method):
  - 28 day: 600 psi

Coverage: One 50 lb. bag of Thin Patch® Powder and 1 ⅔ gal. of Thin Patch® Latex Binder covers approximately 50 ft² at a ⅛" thickness for placements greater than 1" depth, score the surface, allow final set, pre dampen, and place subsequent lift.

No. | Size |
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TAM TP | 50 lb. bag, 48/pallet |
**Thin Top Supreme**  
**Description:** A latex and microsilica modified cementitious mortar designed for use as a floor or deck topping at thickness of 1/16” to 3/8”. Provides excellent durability under freeze/thaw cycling as well as protection against ingress by water, de-icing salts and corrosion. Has normal set times and a mid range slump for easy workability.

**Application:** Used for parking decks, pavements, joints, marine structures, curbs and gutters, ramps, floors, walkways.

**Features/Benefits:**
- Provides a strong, wear resistant thin overlay.
- Excellent durability under freeze/thaw cycling.
- Contains an integral corrosion inhibitor.
- Excellent bond to concrete and steel.
- Resists penetration of water & de-icing salts for good substrate protection.
- Suitable for both interior and exterior use.
- Consistent working time in cold & hot weather.

**Thickness Per Lift:**  
1/16” - 3/8” neat

**Specifications:**  
- 72°F  
- Application Life: 30-40 min
- Set Time (ASTM C-266):
  - Initial: 1-1.5 hrs  
  - Final: 3 hrs
- Compressive Strength (ASTM C-109):
  - 1 day: 3,000 psi
  - 7 days: 5,800 psi
  - 28 days: 8,000 psi
- Coverage: One 50 lb. bag yields approximately 0.45 ft³ when mixed with 3 qts of water. Typical water requirement is 2.75 to 3.5 qts/bag.

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**Mascopatch**  
**Description:** A 2-component, polymer modified, portland cement mortar. It is a fast setting patching material for surface repairs from ⅛” to 1” neat and up to 2.5” extended in both interior and exterior horizontal applications. Exhibits superior workability by maintaining a smooth, creamy consistency for easy troweling. Thermal expansion similar to concrete. Consistent color match for concrete. High bond, compressive, flexural and tensile strengths. Interior and exterior applications.

**Application:** Ideal for a wide variety of concrete surface repairs such as surfaces subject to freeze/thaw cycles; refinish old concrete and masonry surfaces; parking garages, ramps, warehouses, loading docks and all structural surface repair; fill in pits, voids and defects in concrete and masonry. Open for foot traffic in 12 hrs and light pneumatic tire in 24 hrs.

**Thickness Per Lift:**  
- ⅛”-1” neat  
- 1”-2.5” extended

**Specifications:**  
- 72°F  
- Application Life: 30 min
- Set Time (ASTM C-266):  
  - Initial: 2 hrs  
  - Final: 4–5 hrs
- Compressive Strength (ASTM C-109):
  - 3 days: 2,500 psi
  - 7 days: 3,800 psi
  - 28 days: 5,000 psi
- Tensile Strength (ASTM C-496):
  - 28 days: 650 psi
- Flexural Strength (ASTM C-78):
  - 28 days: 900 psi
- Bond Strength (ASTM C-1042):
  - 28 days: 1,450 psi

**Coverage:** 45 lbs. will fill approximately 0.42 ft³ when mixed with Mascobond AR and will cover 20 ft² at a ⅛” thickness. For applications over 1” in depth, extend with 20 lbs. clean washed ⅜” pea gravel. Yield will increase to .55 ft³.

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*Read manufacturers’ data sheets for complete specifications, installation procedures, and MSDS precautions.  
Warning: Chronic health effect possible—inhalation of silica dust may cause lung injury/disease (Silicosis).  
Take appropriate measures to avoid breathing dust. See page 164-165 for more information.*

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**No. Size**  
**EU TTS** 50 lb. bag, 64/pallet

**No. Size**  
**Powder**  
**MS MP** 45 lb. bag, 48/pallet

**Liquid**  
**MS TIGAR** 1 gal. pail, 4/case, 40 lbs.

**MS 5GAR** 5 gal. pail, 50 lbs., 24/pallet

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Concrete Top Supreme

Description: A latex and microsilica modified cementitious mortar designed for use as a concrete repair mortar at thicknesses of 3/8” to 2”. Provides protection from corrosion and excellent durability under freeze-thaw cycling as well as reducing ingress by water and de-icing salts. Offers normal set times, a mid range slump for easy workability and is compatible with galvanic anodes.

Thick ness Per Lift:  
¾” - 2” - Neat  
2” - 4” - Extended

Application: Designed for use on parking decks, pavements, joints, marine structures, curbs & gutters, ramps, floors, and walkways.

Specifications:
- Application Life: 72°F
- Set Time:
  - Initial: 1 hour
  - Final: 2.5 hours
- Compressive Strength (ASTM C-109):
  - 1 day: 4,000 psi
  - 7 days: 7,600 psi
  - 28 days: 10,200 psi
- Bond Strength (ASTM C-882):
  - 28 days: 2,500 psi

Coverage: One 50 lb. bag yields approximately .40 ft³ when mixed with 2.5 qts of water. A unit of material may be extended with 15 lbs. of 3/8” pea gravel. This will yield 0.55 ft³.

Patchcrete

Description: A 2-component latex modified patching and underlayment material. One is a high solids content acrylic latex. The other is a portland cement with graded silica and special chemical additives. Latex modified concrete gives improved bonding, improved chemical resistance, water resistance, tensile strength, compressive strength and flexibility.

Application: This high strength portland cement latex combination provides a smooth durable semi-resilient surface which can be used as a finished floor in many applications. Easy to mix and apply, requiring no special tools. Suitable for use as a flowable topping or underlayment, or as a floor or wall repair material when mixed to a stiffer, trowelable consistency. Meets and exceeds the high quality standards required by architects.

Thickness Per Lift:  
⅛”-1” neat  
1”-3” extended

Specifications:
- Application Life: 72°F
- Set Time (ASTM C-266):
  - Initial: 120 min
  - Final: 240 min
- Compressive Strength (ASTM C-109):
  - 1 day: 2,000 psi
  - 7 days: 4,100 psi
  - 28 days: 5,500 psi
- Slant Shear Bond (AASHTO T-237):
  - 28 days: 1,400 psi

Coverage:
One 45 lb. bag of powder and 1 gal. of liquid will yield 0.42 ft² and will cover 45 ft² at 1/8” thickness. For applications over 1”, extend with 20 lbs. clean washed pea gravel. Yield will be increased to approximately 0.55ft².

Read manufacturers’ data sheets for complete specifications, installation procedures, and MSDS precautions.  
Warning: Chronic health effect possible—inhalation of silica dust may cause lung injury/disease (Silicosis). Take appropriate measures to avoid breathing dust. See page 164-165 for more information.
**TRAFFIC SURFACE**

**R-50**

**Description:** A latex concrete overlayant that is a companion product to the time and performance proven R-25 Latex Concrete Underlayment. It is a heavy duty, portland cement based, latex modified concrete mortar mix designed for those applications requiring stronger physical characteristics than R-25 provides. It is a 2 part product consisting of latex binder, a synthetic latex emulsion and a dry component powder. When the 2 components are blended together and applied the end result is a strongly bonded, high strength, better corrosion resistance and a harder surface than R-25.

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder</td>
<td>TAM ER 50 lb. bag, 48 pallet</td>
</tr>
<tr>
<td>RA R50</td>
<td>1 gal. pail, 4/crn, 48 lbs.</td>
</tr>
<tr>
<td>RA SGR50</td>
<td>5 gal. pail, 50 lbs., 24/pallet</td>
</tr>
<tr>
<td>RA SGR50</td>
<td>50 gal. drum, 550 lbs.</td>
</tr>
</tbody>
</table>

**Application:** Recommended for overlayment and patching of warehouse and industrial floors. Exterior applications such as sidewalk, walkway and ramp overlays. Parking deck patching and overlays, where salt attack is reduced. Fixing rained out or freeze damaged slabs. Leveling or creating pitch for drainage. Wearing surface that readily receives finish stains, sealers and coatings. Apply from feather edge to any thickness. Can be coved up walls. May be sanded smooth or broom finished.

**Thickness Per Lift:**
- 0–1” neat
- 1”–3” extended

**Applicable Standards:**
- USDA Approval

**Specifications:**
- Application: 75° F
- Application Life: 30 min
- Compressive Strength (ASTM C-266):
  - Initial: 25 min
  - Final: 45 min
- Tensile Strength (ASTM C-190):
  - 28 days: 850 psi
  - 56 days: 1,700 psi
- Flexural Strength (ASTM C-78):
  - 28 days: 1,700 psi
- Compression Strength (ASTM C-109):
  - 28 days: 4,000 psi
- Shear Bond Strength:
  - 5 days: 650 min

**Coverage:**
- 1.2 gal. unit: 1 bag to 1 jug yields .52 ft³ and will cover 50 ft² at 1/8” thickness.
- 5 gal. unit: 4 bags to 1 pail yields 2.08 ft³ covers 200 ft² at 1/8” or 100 ft² at 1/4”.
- 50 gal. unit: 40 bags to 1 drum yields 20.8 ft³ covers 2000 ft² at 1/8” or 1000 ft² at 1/4”. For thickness above 1/8” R-50 may be bulked with clean aggregate such as #8 sand, 1/4” size rock or chip. Above 1” thick, add 3/8” size pea gravel. 25# to each bag is recommended.

**Express Repair**

**Description:** A cement based, ready to use patching and repair mortar with rapid strength gain. Contains a unique migratory corrosion inhibitor and requires only potable water for mixing. It develops a tenacious bond and has excellent resistance to freeze/thaw and weathering.

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder</td>
<td>TAM ER 50 lb. bag, 48 pallet</td>
</tr>
</tbody>
</table>

**Application:** Used for rapid patching of horizontal concrete surfaces such as highways, bridge decks, parking decks, loading docks, pavement joints, and industrial floors.

**Thickness Per Lift:**
- 1/8”–1/2” neat
- 1 1/8”–6” extended

**Applicable Standards:**
- Meets or exceeds the requirements of ASTM C-928.

**Coverage:** One 50 lb. bag yields approximately .42 ft³. Extending with 50 lbs. of 3/8” pea gravel per bag will increase yield to approximately .75 ft³.

**Specifications:**
- Application: 75° F
- Application Life: 25 min
- Compressive Strength (ASTM C-266):
  - Initial: 550 psi
  - Final: 9,200 psi
- Tensile Strength (ASTM C-190):
  - 7 days: 700 psi
  - 28 days: 915 psi
- Flexural Strength (ASTM C-78):
  - 28 days: 2,100 psi
- Bond Strength (ASTM C-882 mod.):
  - 28 days: 2,100 psi

**Read manufacturers’ data sheets for complete specifications, installation procedures, and MSDS precautions.**

**Warning:** Chronic health effect possible—inhalation of silica dust may cause lung injury/disease (Silicosis). Take appropriate measures to avoid breathing dust. See page 164-165 for more information.
EucoSpeed MP

**Description:** A rapid setting, very rapid hardening magnesium phosphate material for patching and repair of concrete and masonry surfaces. Product requires only the addition of water and can be installed with standard tools, equipment and procedures. It bonds tenaciously to properly prepared concrete and provides a durable patch which is resistant to freeze/thaw cycling and de-icing salts.

**Application:** Recommended for bridge decks, ramps, parking garages, floors, walls (formed), pavements, marine structures, and joint repairs.

**Features / Benefits:**
- Rapid setting for quick repairs in less than one hour
- Extremely high early strength for quick turnaround time
- Easy to use one part system
- Suitable for both interior and exterior applications
- Durable under freeze/thaw cycling and salt exposure

**Thickess Per Lift:**
- ¼” - 1” Neat
- 1” - 6” Extended

**Applicable Standards:**
ASTM C-928 for rapid repair.

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VersaSpeed LS

**Description:** A versatile, rapid setting patching and repair compound for both horizontal and form & pour repair projects. Requiring only the addition of water, VersaSpeed LS is a low shrinkage, high early strength material that is easy to use with an accelerated set time for fast project turn around. Similar in appearance to concrete and is suitable for use in patching and repairing concrete surfaces from approximately 1/4” to 6” in thickness.

**Application:** Warehouses, Industrial, Commercial, Institutional Floors, Traffic, Pavements, Loading Docks, Roads, Highways, Parking decks and ramps, Form and pour applications.

**Features/Benefits:**
- Fast set time
- Quick turnover of projects
- High rapid strength
- Economical repairs
- Suitable for interior & exterior applications

**Thickness Per Lift:**
- ¼”-1” neat
- 1”-6” extended

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**Specifications:**
- **EucoSpeed MP**
  - **Application Life:** 5 min
  - **Set Time**
    - Initial: 8 to 12 min
    - Final: 12 to 20 min
  - **Compressive Strength** (ASTM C-109):
    - 2 hrs: 3,500 psi
    - 3 hrs: 5,000 psi
    - 1 day: 6,000 psi
    - 7 days: 7,000 psi
    - 28 days: 7,500 psi
  - **Flexural Strength** (ASTM C-78):
    - 4 hours: 400 psi
    - 3 days: 500 psi
  - **Bond Strength** (ASTM C-882):
    - 1 day: 1,300 psi
    - 28 days: 1,700 psi
  - **Coverage**:
    - 50 lb. bag yields approximately 0.42 ft³ of mortar when mixed with 0.45 gal of water. Product may be extended with up to 30 lb. of 3/8” pea gravel. Yield will increase to approximately 0.57 ft³ per unit.

- **VersaSpeed LS**
  - **Application Life:** 30 min.
  - **Set Time** (ASTM C-403):
    - Initial: 90-120 min
    - Final: 120-150 min
  - **Compressive Strength** (ASTM C-109):
    - 5 hrs: 3,500 psi
    - 1 day: 5,500 psi
    - 7 days: 8,500 psi
    - 28 days: 10,000 psi
  - **Flexural Strength** (ASTM C-348):
    - 1 day: 700 psi
    - 7 days: 1,000 psi
    - 28 days: 1,250 psi
  - **Coverage**:
    - 50 lb. bag yields approximately .37 ft³ when mixed with .42 gal of water. Product may be extended with up to 25 lbs. of thoroughly washed 3/8” pea gravel. Approximate extended yield: 0.52 ft³ per bag.

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**Warning:** Chronic health effect possible—inhalation of silica dust may cause lung injury/disease (Silicosis). Take appropriate measures to avoid breathing dust. See page 164-165 for more information.