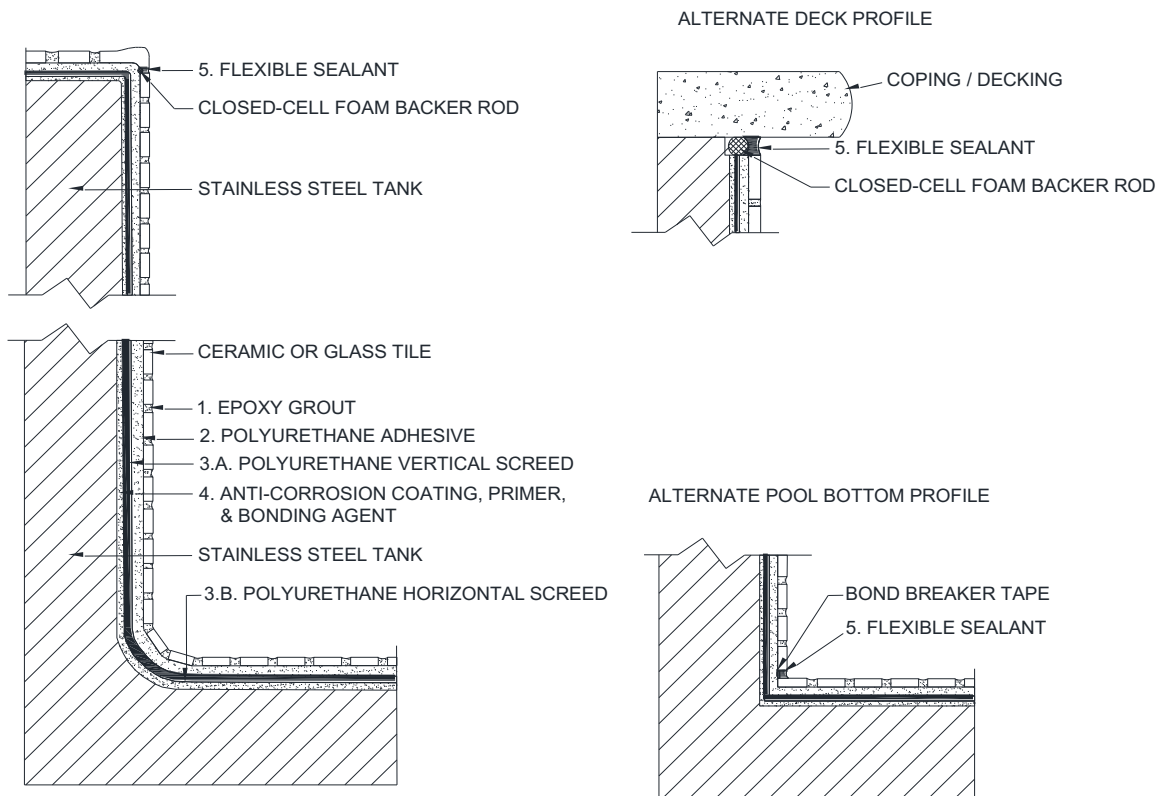


# STAINLESS STEEL POOL

Ceramic Tile, Glass Tile



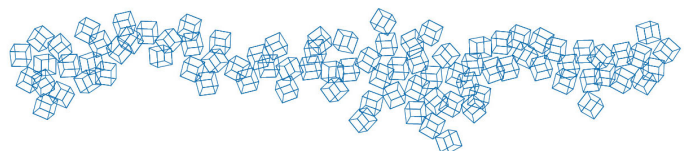
SCALE: N.T.S.

MAPEI Products Assembly	ANSI	ISO 13007	Minimum Performance Requirements from TCNA Guidelines
<b>1. Grout Options:</b> A. Kerapoxy® CQ	A118.3	R2/RG	Epoxy Grout: ANSI A118.3 or ISO 13007 RG
<b>2. Polyurethane Adhesive:</b> A. Ultrabond Eco PU 2K B. Kerapoxy 410	A118.3	R2	Flexible Sealant: ANSI A118.01, 3.7 and ASTM C920
<b>3. Polyurethane Screed:</b> A. Mapedeck Litescreed B. Mapedeck Litescreed Tixo			<b>Environmental Classifications</b> Res3, 4, 6, 7 ; Com3, 4, 6, 7
<b>4. Anti-Corrosion Primer / Bonding Agent:</b> A. Mapedeck Primer 200			<b>Materials for Green/Sustainable Design</b> Installation Materials that meet ANSI A138.1, <i>The American National Standard Specifications for Sustainable for Sustainable Ceramic Tiles, Glass Tiles, and Tile Installation Materials.</i>
<b>5. Flexible Sealant:</b> A. Mapesij™ T	A108.01, 3.7		

CAD details and/or specifications are provided as guides. They are intended to assist in the proper detailing or specifying of a project. They are not to scale or intended for construction. The guide specification must be reviewed for code compliance and edited to make it project-specific. Drawings are based on the Tile Council of North America's (TCNA) Handbook for Ceramic, Glass, and Stone Tile Installation and the Terrazzo, Tile and Marble Association of Canada's (TTMAC) Tile Installation Manual. MAPEI products are listed as options and are substituted for TCNA's and TTMAC's listed ANSI and ISO (ISO 13007) standards. For natural stone tiles, refer to Natural Stone Institute, TCNA Natural Stone Tile Selection and Installation Guide and consult stone tile supplier for suitability. Please refer to the referenced handbooks and current data sheets for complete instructions and application limitations. Some installation methods and component materials may not be referenced. MAPEI encourages the user to consult all approved resources to ensure a complete assembly.



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**Guide Specification: 09 30 00 - Tiling**  
**STAINLESS STEEL POOLS**  
Ceramic Tile, Glass Tile

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Surface preparation materials.
- B. Setting materials.
- C. Grout materials.
- D. Waterproof membrane.
- E. Crack isolation membrane.
- F. Flexible sealant.
- G. Penetrating tile and stone sealers.
- H. Tile and stone maintenance, cleaners and grout haze removers.

**1.02 RELATED SECTIONS**

- A. Section 03 30 00 – Cast-in-Place Concrete.
- B. Section 03 39 00 – Concrete Curing.
- C. Section 03 40 00 – Precast Concrete.
- D. Section 06 11 00 – Wood Framing and Sheathing.
- E. Section 07 60 00 – Flashing and Sheet Metal.
- F. Section 07 92 13 – Elastomeric Joint Sealants.
- G. Section 09 34 00 – Waterproofing-Membrane Tiling.
- H. Section 09 31 33 – Thin-Set Stone Tiling.
- I. Section 13 11 00 – Swimming Pools.

**1.03 REFERENCES**

- A. American National Standards Institute (ANSI):
  - 1. ANSI A108 Series/A118 Series – American National Standards for Installation of Ceramic Tile.
  - 2. ANSI A137.1 – American National Standard for Ceramic Tile.
  - 3. ANSI A137.2 – American National Standard for Glass Tile.
  - 4. ANSI A138.1 – American National Standard Specifications for Green Squared Certification for Tiles and Installation Materials.
- B. ASTM International (ASTM):
  - 1. ASTM A1064 – Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

2. ASTM C144 – Standard Specification for Aggregate for Masonry Mortar. Jobsite mix.
  3. ASTM C150 – Standard Specification for Portland Cement. Jobsite mix.
  4. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members.
- C. TCNA (HB) – Handbook for Ceramic Tile, Glass, and Stone Installation; Tile Council of North America.
- D. TTMAC – Specifications Guide 09 30 00 Tile Installation Manual.
- E. International Organization for Standardization (ISO):
1. ISO 13007 – Ceramic tiles – Grout and adhesives.
- F. Leadership in Energy and Environmental Design (LEED®) – U.S. Green Building Council.

#### **1.04 SUBMITTALS**

- A. Submit under provisions of Section 01 30 00 – Administrative Requirements.
- B. Product Data: Manufacturer's technical information for each product specified.
- C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.
- D. Samples: Color charts for selection of grout.
- E. Manufacturer's Certificates: Certify that products meet or exceed specified requirements. When applicable, submit a Master Grade Certificate signed by the manufacturer and the installer certifying that products meet or exceed the specified requirements of ANSI A137.1, ANSI A137.2, and/or ANSI A137.3.
- F. Installation Instructions: Manufacturer's printed instructions for each product.
- G. Maintenance Data: Include recommended cleaning methods, cleaning materials, and maintenance coatings.

#### **1.05 QUALITY ASSURANCE**

- A. Ensure Single-Source Warranty Requirements and Compatibility of Products: Provide cleaners, sealing and maintenance products, tile grout, setting materials, underlayments, additives, accessories and factory-prepared dry-set mortars from the same manufacturer.
- B. Installer Qualifications:
1. Engage an experienced installer who has completed tile installations similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance. Installer to have a minimum of five years' experience.
  2. Five-Star member of the National Tile Contractors Association or a Trowel of Excellence member of the Tile Contractors' Association of America.
  3. Installer's supervisor for the project must hold the International Masonry Institute's Foreman Certification.
  4. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.
- C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

#### **1.06 PRE-INSTALLATION CONFERENCE**

- A. Convene one week prior to commencing work of this section.
- B. Require attendance of installation material manufacturer, tile supplier, tile installer and installers of related work. Review installation procedures and coordination required with related work.
- C. Meeting agenda includes but is not limited to:
  - 1. Tile and installation material compatibility.
  - 2. Grouting procedure.
  - 3. Maintenance and cleaning products and methods.
  - 4. Surface preparation.

#### **1.07 DELIVERY, STORAGE AND HANDLING**

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Prevent damage or contamination to materials by water, freezing, foreign matter and other causes.
- B. Protect setting materials from freezing and overheating in accordance with manufacturer's instructions.
- C. Store tile and setting materials on elevated platforms, under cover and in a dry location and protect from contamination, dampness, freezing and overheating.
- D. Do not use frozen materials unless specifically allowed by manufacturer.
- E. Deliver and store materials on site at least 24 hours before work begins.
- F. Provide heated and dry storage facilities on site.

#### **1.08 ENVIRONMENTAL REQUIREMENTS**

- A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.
- B. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- C. For Interior Applications:
  - 1. Do not begin installation until building is completely enclosed and maintains temperature and humidity conditions consistent with "after occupancy" conditions for a minimum of 2 weeks.
  - 2. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
  - 3. Vent temporary heaters to exterior to prevent damage to tilework from carbon dioxide build-up.
  - 4. Maintain temperatures at not less than 50°F (10°C) in tiled areas during installation and for 7 days after completion, unless higher temperatures are required by referenced installation standards or manufacturer's written instructions.

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Acceptable Manufacturer: MAPEI Corporation, 1144 E. Newport Center Drive, Deerfield Beach, FL 33442, USA; Toll-Free Tel: 1-800-992-6273; Fax: 954-246-8805; Email: [TechServiceRequests@mapei.com](mailto:TechServiceRequests@mapei.com); Web: [www.mapei.us](http://www.mapei.us).
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600 – Product Requirements.

- C. Substitutions: Not permitted.

## **2.02 POLYURETHANE SCREED**

- A. Mapedeck Litescreed Tixo is a two-component, lightweight, thixotropic, polyurethane-resin-based screed compound to smooth and level metal surfaces – internal and external, vertical and horizontal – before the installation of finishes or tile.
- B. Mapedeck Litescreed is a two-component, lightweight, self-extinguishing, polyurethane-resin-based self-leveling underlayment used to smooth and level interior and external decks before the installation of resin flooring systems and other approved floor coverings.

## **2.04 ADHESIVE POLYURETHANE or 100% SOLID EPOXY**

- A. Two-component, solvent-free, high performance polyurethane adhesive with very low emission level of volatile organic compounds (VOC) for ceramic and stone tiles.
  - 1. MAPEI Ultrabond ECO PU2K
- B. Two-component, solvent free, 100% solid epoxy for setting tile, stone or glass mosaic.
  - 1. MAPEI Kerapoxy 410

## **2.05 GROUT MATERIALS**

- C. Premium Epoxy Mortar and Grout: For grout joints from 1/16 inch to 3/8 inch (1.5 mm to 10 mm), ANSI A118.3 and ISO 13007 R2/RG, .
  - 1. Product: MAPEI, Kerapoxy CQ.
  - 2. Provide product with a VOC content of 65 g/L or less according to Rule #1168 of California's SCAQMD.
  - 3. Product shall conform to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for the school classroom, private office, and single-family residence parameters when modeled as Flooring. "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers".

## **2.06 ANTICORROSION COATING PRIMER / BONDING AGENT**

- A. General: Manufacturer's standard product that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
  - 1. Product: Products from MAPEI.

## **2.08 FLEXIBLE SEALANT**

- A. 100%-Silicone Sealant: Heavy-traffic expansion and movement joints, horizontal and vertical complying with ASTM standards; ASTM: Meets C920, Type S, Grade NS, Class 25, Use T1, T2, NT, I, M, G, A and O, and conforms to C794 adhesion properties (#23 Clear meets ASTM C920, Type S, Grade NS, Class 50, Use NT).
  - 1. Product: MAPEI, Mapesil T.

## **2.09 GROUT RELEASE**

- A. Grout Release: High-performance sacrificial coating that protects the tile surface from grout stains, improves cleanability and reduces the risk of grout haze or film residue, interior and exterior applications on natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), porcelain/ceramic tiles, masonry and quarry tiles.
  - 1. Product: MAPEI, UltraCare Grout Release.

## **2.10 PENETRATING STONE, TILE AND GROUT SEALERS**

- A. Solvent-Based Penetrating Sealer: Natural-look, providing maximum protection against most common stains. For use on all interior and exterior natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), unglazed porcelain and ceramic tiles, masonry, quarry tiles and cement grout. Can also be used as a pre-grouting sealer.
  - 1. Product: MAPEI, UltraCare Penetrating SB Stone, Tile & Grout Sealer.
- B. Water-Based Penetrating Sealer: Premium, natural-look, providing maximum protection for interior and exterior natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), unglazed ceramic tile and masonry. Can also be used as a pre-grouting sealer.
  - 1. Product: MAPEI, UltraCare Penetrating Plus Stone, Tile & Grout Sealer.
- C. Water-Based Penetrating Sealer: Provides protection against staining for use with sanded and unsanded cementitious grout joints. Can also be used as a pre-grouting sealer.
  - 1. Product: MAPEI, UltraCare Grout Sealer.

## **2.11 TILE AND STONE MAINTENANCE, CLEANERS AND GROUT HAZE REMOVERS**

- A. Neutral-pH Cleaner: Highly concentrated, zero-VOC, for ceramic, porcelain and natural stone surfaces. Helps prevent soap scum buildup and hard water deposits.
  - 1. Product: MAPEI, UltraCare Concentrated Tile & Grout Cleaner.
- B. High-Alkaline Cleaner: Highly concentrated and degreaser that quickly removes waxes, grease, oil, light soap scum, mildew and algae stains. For areas that have been neglected or subject to heavy use.
  - 1. Product: MAPEI, UltraCare Heavy-Duty Stone, Tile & Grout Cleaner.
- C. Cement Grout Haze Remover: Professional-strength water-based formulation that helps remove cement grout haze from tile, concrete and acid-resistant natural stone surfaces. Acidic, low-odor, non-flammable.
  - 1. Product: MAPEI, UltraCare Cement Grout Haze Remover.

## **2.12 MIXES**

Proportion and mix materials in accordance with manufacturer's most current written instructions and applicable ANSI standards.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Examine substrates for compliance with requirements for conditions affecting performance of the work. Refer to ANSI A108.01, ANSI A108.02 and if applicable ANSI A108.19.
- B. Do not proceed with tilework until surfaces and conditions comply with requirements indicated in reference tile installation standard and manufacturer's printed instructions.
- C. When underlayment, patching, leveling and rendering materials are needed, they must be from the setting materials supplier. For improved warranty and single-source responsibility.

### **3.02 INSTALLATION**

- A. Install tile in accordance with manufacturer's printed instructions and the applicable requirements of ANSI A108 Series for the materials being used.

- B. Apply waterproof membrane only in dry weather, when ambient and substrate temperatures are above 40°F (4°C).
- C. Waterproofing: Install necessary components to form a watertight installation. Dry film thickness (DFT) must comply with manufacturer's recommendations.
- D. Install tile in accordance with TCNA methods specified on the drawings.
- E. Install tile in accordance with TCNA methods listed below.
  - 1. Tile in Pool: TCNA method P601TB.
- F. Expansion and Control Joints: TCNA method EJ171.
- G. Apply tile and grout cleaners, sealers and maintenance products in accordance with manufacturer's printed instructions and technical data sheets.
- H. Fill no more than the pool can be filled with fresh water, the rate of filling being the same as when it was originally filled for the water test, 24 inches to 30 inches (61 cm to 76 cm) per day. If the pool water is heated, the temperature should be raised slowly, at a rate not exceeding about 2°F (1°C) per hour.

### **3.03 GROUTING**

- A. Grout joints in accordance with manufacturer's instructions and ANSI A108.06 and/or ANSI A108.10.
- B. Remove standing water, dust, and foreign substances from joints to be grouted.
- C. Clean and dry tile surfaces.
- D. After grouting, remove all grout residue promptly.

### **3.04 PROTECTION**

- A. Floors: Protect from all traffic for at least 72 hours after installation.
  - 1. Do not step on floor for at least 24 hours; if traffic is unavoidable after that, use plywood stepping boards.
  - 2. Protect from heavy traffic for at least 7 days after installation.
  - 3. When fast-setting materials are used to allow faster occupancy, comply with the manufacturer's recommendations.
- B. Walls: Protect from impact, vibration and heavy hammering on adjacent and opposite walls for 14 days after installation, unless manufacturer's instructions allow a shorter period.
- C. Protect from stain-causing food products and chemicals for at least 14 days.
- D. Protect from freezing and total water immersion for at least 21 days after installation.

**END OF SECTION**