BUILDING TRUST

Section 03 01 00
Maintenance of Concrete

SIKA SPECIFICATION NOTE:
This guide specification includes test methods, materials and installation procedures for **SikaQuick Smooth Finish,** an ultra-light, fast setting, concrete re-profiling and patching mortar. This guide specification should be adapted to suit the needs and conditions of individual projects. It is prepared in CSI Master Format and should be included as a separate section under Division 3.

Part 1 - General

1.01 General requirements

This Specification shall be read as a whole by all parties concerned. Each Section may contain more or less the complete Work of any trade. The Contractor is solely responsible to make clear to the Subcontractors the extent of their Work and coordinate overlapping Work.

1.02 System description

The Work of this section shall include furnishing all labor, materials, equipment, and supervision to prepare the surface of the structural concrete members and to install the material as indicated.

1.03 Related sections

A. Concrete Repair: Section 03 01 30.61 (cast-in-place concrete)

B. Concrete Repair: Section 03 01 30.71 (cast-in-place concrete)

C. Concrete Repair: Section 03 01 40.61 (precast concrete)

D. Concrete Repair: Section 03 01 40.71 (precast concrete)

1.04 Submittals

A. Substitutions: Requests for substitution must be received by Architect at least 14 days prior to bid opening and shall be accepted only from prime bidders. Request shall include:

a. Documentation from an approved independent testing laboratory showing compliance with this specification.

b. Record of past performance, list of similar installations.

c. Detailed comparison of the qualities of the proposed substitute with the specified product, statement of product costs showing all savings passed to owner if approved.

d. Certification by the contractor that the proposed substitute is in every significant way equal to or better than the specified product.

B. Submit two copies of manufacturer's actual literature including: Product Data Sheets and appropriate Safety Data Sheets (SDS).

1.05 Quality assurance

Comply with the following unless modified by this specification.

a. ASTM C109/C109M-02 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-inch. Cube Specimens)

b. ASTM C191-04 Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle

1.06 Delivery, Storage And Handling

A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged material or unsealed pails must be removed from the site immediately.

B. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.

C. Store and handle the specified product as recommended by the manufacturer.

1.07 Job Conditions

A. Environmental Conditions: Do not apply material if it is raining or snowing or if such conditions appear to be imminent. Minimum application temperature 45ºF (7ºC) and rising.

B. Protection: Precautions should be taken to avoid damage to packaging

1.08 Warranty

Provide a written warranty from the manufacturer against defects of materials for a period of one (1) year, beginning with date of substantial completion of the project.

Part 2 - Products

2.01 Manufacturer

SikaQuick Smooth Finish, as proposed by Sika Corporation, is considered to conform to the requirements of this specification.

2.02 Materials

SikaQuick Smooth Finish is a fast setting, one component, durable mortar for repairing and re-profiling vertical and overhead concrete surfaces to achieve a smooth finish.

2.03 Performance Criteria

Typical Properties of SikaQuick Smooth Finish:

1. Aspect	Light weight mortar
2. Color	Concrete gray
3. Mixing Ratio	8 - 9 quarts of water per 50 lb. bag
4. Application Thickness	Min: Feather Edge
	Max: 1/2”
5. Finishing Time	1 hour
6. Compressive Strength (ASTM C-109)	
1 day @ 73ºF (23ºC)	1,000 psi
28 days @ 73ºF (23ºC)	>2,000 psi
7. Shall not re-emulsify when wet.	
8. Shall be non-metallic with no added chlorides and shall be pre-blended	

Note: Tests above were performed with the material and curing conditions @ 71°F – 75°F and 45-55%relative humidity.

Part 3 – Execution

3.01 Surface Preparation

Concrete - Concrete/Mortar: Remove all deteriorated concrete, dirt, oil, grease, and all bond-inhibiting materials from surface. After preparation, substrate strength should be verified prior to patch placement. Substrate should be dry or saturated surface dry (SSD) with no standing water during application.

3.02 Mixing and Application

A. Wet down all tools and mixer to be used. Mix mechanically with a low-speed drill (400 - 600 rpm) and mixing paddle or by hand.

B. Mix to a uniform consistency, maximum 3 minutes. Manual mixing can be tolerated only for less than a full unit. Thorough mixing and proper proportioning of the powder and liquid is necessary. Inaccurate proportioning of the powder to liquid will result in a finished product that may not conform with stated properties.

C. Start mixing with 8 - 9 quarts of water per 50 lb. bag. DO NOT EXCEED 9 qts. Adjust the water dosage, if necessary, to achieve the desired consistency. DO NOT OVER WATER. Over-watering may result in difficulty handling and/or not meeting stated property values. Do not retemper. Clean bucket and mixing equipment in between batches.

3.02 Application

A. SikaQuick Smooth Finish should be applied in one pass in thicknesses ranging from a true feather edge to 1/2” in depth. Typical working time of the product is 30 minutes at 73°F. Working time will vary depending on application temperature. In high temperature work environments, cold water should be used to increase working time.

B. Painting: Can be overcoated same day.

C. Once material is in place, as the material hardens, use a trowel to shave or cut the excess material to the desired shape. Material can be sanded and painted the same day.

3.03 Cleaning

A. Clean all tools immediately after use.

B. Clean excess material from surrounding areas immediately.

Concrete Restoration Systems by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071