BUILDING TRUST

PRODUCT DATA SHEET

SikaTile®-350 Flex Set

SUPERIOR GRADE POLYMER MODIFIED THIN SET MORTAR

PRODUCT DESCRIPTION

SikaTile®-350 Flex Set is a superior grade, polymer-modified, Portland cement, flexible, multi-purpose thin set mortar with exceptional features offering flexibility, higher bond strengths, extended adjustability and open times. It can be used for both interior and exterior installations of tile in most residential and commercial floor and wall applications. This mortar contains a high blend of dry polymers, resulting in excellent adhesion to the substrate and tile. SikaTile®-350 Flex Set, features innovative Dustless Technology producing approximately 80% less dust than ordinary thin sets and is designed to promote cleaner working conditions and reduce mess. It uses less water and is creamier and easy to spread.

USES

SikaTile®-350 Flex Set provides flexible, high strength for flat, even installations and is suitable for bonding the following types of tile and stone:

- Brick and thin brick
- Cement-based precast terrazzo
- Impervious porcelain and glass tile
- Natural stone tile
- Vitreous, semi-vitreous or non-vitreous tile:
  - Ceramic, mosaic, quarry, cement body tile

SikaTile®-350 Flex Set can be installed in most interior and exterior residential and commercial installations on floors and walls on the following recommended substrates:

- Brick Masonry
- Cement Backer Board[1]
- Cement Mortar Beds
- Cement Plaster
- Cement Terrazzo
- Ceramic Tile and Stone
- Concrete
- Concrete Masonry
- Exterior Grade Plywood[2]
- Gypsum Wallboard[2]
- SikaLevel®SikaTile® Membranes
- Approved SikaLastic® Under Tile Waterproofing

[1] Consult cement backer board manufacturer for installation recommendations and to verify acceptability for exterior use.
[2] Interior Use Only.

CHARACTERISTICS / ADVANTAGES

- Ideal for Exterior Vertical Installations
- For Glass, Porcelain, Ceramic Tile and Natural Stone
- Adheres to Non-Absorptive Surface
- For interior and exterior floors and walls
- Dustless formula – provides approximately 80% less dust than ordinary mortars
- Cleaner working conditions by minimizing dust
- Creamier and easier to spread
- Uses less water for consistent hydration and quicker drying
- Longer working time
- No-Slake - No wait. Just mix, trowel, and install
- Mold and mildew resistant

ENVIRONMENTAL INFORMATION

Sika® is committed to environmental responsibility in both products produced and in manufacturing practices. Use of this product can contribute towards LEED® v4.1 certification:

- Up to 2 points towards MR Credit 5, Regional Materials
- Up to 1 point towards IEQ Credit 4.1, Low-Emitting Materials – Adhesives & Sealants

APPROVALS / STANDARDS

American National Standards Institute (ANSI) — ANSI A108.5, A118.15E, A118.4E and A118.11 of the American National Standards for the Installation of Ceramic Tile
ASTM International (ASTM)

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2” or 50mm Cube Specimens)
- Resilient Floor Covering Institute - (RFCI) Recommended Work Practices for Removal of Resilient Floor Coverings
- Tile Council of North America (TCNA) - TCNA Handbook for Ceramic Tile Installation, TCNA EJ171 Movement Joint Guidelines.
- ISO 13007-2 C2EP1

PRODUCT INFORMATION

Chemical Base	Portland cement, selected aggregates, water retention additives, re-dispersible polymer
Packaging	50 lb. (22.68 kg.) bag
Shelf Life	15 months from date of production when stored in original, sealed package
Storage Conditions	Store in undamaged, original, sealed package, in dry conditions at 73° F (23° C)
Appearance / Color	Gray and White

TECHNICAL INFORMATION

Slant Shear Strength

4 Week Shear Bond Strength

Property	Test Method	Requirement	Typical Results
Porcelain Tile	A118.15 Section 7.2.5	> 400 psi	400 - 450
Quarry Tile to Plywood	A118.11 Section 4.1.2	> 150 psi	150 - 250

ISO 13007 Classification

Classification Code	Classification Requirement	Results
C2 (cementitious, improved adhesion)	≥ 145 psi (1 MPa) after standard aging. Heat aging, water immersion and freeze/thaw cycles	Pass
E (extended open time)	≥ 72.5 psi (0.5 Mpa) after 30 minutes	Pass
P1 (normal adhesion to plywood)	≥ 72.5 psi (0.5 Mpa)	Pass

APPLICATION INFORMATION

Mixing Ratio	5 quarts (4.75 liters) of clean potable water per 50 lb. bag
Coverage	

RECOMMENDED TROWEL SIZE/ TAMAÑO DE LLANA RECOMENDADO

Tile/Loseta	Trowel/Llana	Coverage/Cobertura
Ceramic/ Cerámica	**1/4" x 1/4" x 1/4"** (6 mm x 6 mm x 6 mm) Square Notch 	65 - 75 ft² per unit. (6.0 - 6.9 m² por bolsa)
Quarry Tile, Rough Stone/ Loseta Industrial, Piedra áspera	**1/4" x 3/8" x 1/4"** (6 mm x 10 mm x 6 mm) Square Notch 	55 - 65 ft² per unit. (5.1 - 6.0 m² por bolsa)
Large Tile, Marble, Stone/ Azulejo Grande, Mármol, Piedra	**1/2" x 1/2" x 1/2"** (12 mm x 12 mm x 12 mm) Square Notch 	35 - 45 ft² per unit. (3.2 - 4.2 m² por bolsa)

Pot Life	60 - 90 minutes
Open Time	> 30 minutes - Passes ANSI A118.15 Section 5.3
Cure Time	Product Curing time is affected by ambient and surface temperatures and humidity. Use the following as a guideline. Allow 24-48 hours before grouting and light traffic, and 7 days before heavy or vehicular traffic. As necessary, use plywood or other load distributing protection when moving heavy equipment across tiled assembly.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LIMITATIONS

- All expansion, control, construction, cold, saw-cut, isolation, contraction, and seismic joints in the structure should continue through the tilework, including such joints at vertical surfaces, as specified per TCNA Method EJ171 or TTMAC Specification Guide 09 30 00, Detail 301MJ. Do not cover movement joints with mortar.
- Do not use SikaTile®-350 Flex Set below 40º F (4º C) or above 95º F (35º C) and do not allow mortar to freeze for the first 72 hours.
- Do not bond directly to hardwood, Luan plywood, particle board, parquet, cushioned-back vinyl flooring, metal, fiberglass, plastic, OSB panels or other unstable substrates.
- Ensure the substrate meets deflection requirements.
- When setting moisture sensitive natural stone cement or agglomerate tile use SikaTile®-825 Epoxy Grout.
- Do not use to install resin-backed stone, moisture sensitive natural stone, cement, or agglomerate tile; use SikaTile®-825 Epoxy Grout and Mortar.
- When setting dimensional stone, subfloor deflection requirement is L/720 under live or dead loads as per TCNA.
- Installations that will be continually wet such as swimming pools, fountains and gang showers, the completed installation should be cured a minimum of 14 days and allowed to dry before exposure to water.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

0 g/L

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

All surfaces must be between 40º F (4º C) to 95º F (35º C) and structurally sound (deflection not to exceed 1/360 of the span), dry, clean and free from oil, grease, wax, paint, old adhesives, sealers and curing compounds. Any contaminates which inhibit proper bond must be removed. All substrates should be plumb and true, for large and heavy tile maximum allowable variation is 1/8" in 10' from the required plane, with no more than a 1/16" variation in 24". Patching, leveling or areas requiring a mortar bed should be prepared using appropriate SikaLevel® self-leveling, patching, or SikaTile® underlayment products. Expansion joints should comply with EJ171 Movement joint guidelines per TCNA and ANSI requirements using an ASTM C920 sealant such as SikaSil® WS-295.

SUBSTRATES:

Concrete Substrates: All concrete substrates should be cured a minimum of 28 days and accept water penetration. Test by sprinkling water on various areas of the substrate. If water penetrates, then a good bond can be achieved; if water beads, surface contaminants are present, and loss of adhesion may occur. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Smooth steel troweled floors should be roughed up using mechanical chipping, scraping, or shot blasting. Porous dry concrete, and porous backer board must be "SSD" (Surface Saturated with water but, dry to the touch) prior to the application of SikaTile®-350 Flex Set Mortar.

Lightweight Cement and Gypsum Surfaces: Lightweight or gypsum-based underlayments must obtain a minimum 2000 psi (13.8 MPa) compressive strength. The underlayment must be sufficiently dry and properly cured to the manufacturer's specifications for permanent, non-moisture permeable coverings. Surfaces to be tiled must be structurally sound and subject to deflection not to exceed current industry standards. All lightweight cement or gypsum surfaces should be primed. with a properly applied sealer or a primer coat of SikaTile®-100 Moisture Guard, consisting of 1 part 100 Moisture Guard diluted with 4 parts clean, cool water. Mix in a clean bucket at low speed to obtain a lump free solution. The primer can be brushed, rolled, or sprayed to achieve an even coat. Apply the primer coat to the floor at a rate of 300 ft2/gal (7.5 M2/L). Drying time depends on site conditions but is normally less than 1 hour. Extremely porous surfaces may require 2 coats. At this point, 100 Moisture Guard can be applied to the primed lightweight or gypsum based surface. Refer to the individual product data sheet or packaging directions for application instructions.

Plywood Substrates: Plywood floors, including those under resilient flooring, must be structurally sound and must meet all ANSI A108.01 Part 3.4 requirements. Maximum allowable deflection: L/360 tile L/720 stone. See TCNA F150-21 tile installations, TCNA F141-21 and F250-21 for stone.

Cement Backer Board: Refer to TCNA F144-21 tile installations, TCNA F250-21 stone installations and follow cement board manufacturer's instructions.

MIXING

In a clean container, add approximately 5 quarts (4.75 liters) of clean potable water. Then add the contents of the 50 lb. (22.67 kg) SikaTile®-350 Flex Set Mortar. Mix thoroughly by hand or with a slow speed mixer to a smooth, thick, trowelable consistency. Mortar consistency shall be such that when applied with the recommended notched trowel to the substrate, the ridges formed in the mortar do not flow or slump. During use, stir mortar mix occasionally. Do not add additional water. Do not add latex liquid additives to SikaTile®-350 Flex Set Mortar.

APPLICATION

Read all installation instructions before installation. Choose a notched trowel with sufficient depth to achieve more than 80% mortar contact to both the tile and substrate for all interior applications, and more than 95% for exterior, commercial floor and wet applications. It may be necessary to back-butter the tile to meet these requirements. With pressure, apply a coat of mortar by using the flat side of the trowel to key the mortar into the substrate. With the notched side of the trowel, apply additional mortar by combing it in a single direction parallel to the shortest dimension of the tile. Spread only as much mortar as can be tiled before the product skins over. Open time can vary with jobsite conditions. Set tiles firmly into the wet mortar and push the tiles back and forth in a direction perpendicular to trowel lines to collapse the mortar ridges and to help achieve maximum coverage.

CLEANING OF TOOLS

Clean tools and tile with water before the material dries.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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