

THIN SET FOR ADHERING CERAMIC & PROCELAIN TILE, STONE, THIN BRICK VENEER & PAVINGSTONES

TS DS 5-17

PRODUCT

VBM THIN SET

MANUFACTURER

ORCO BLENDED PRODUCTS
27347 3RD ST. HIGHLAND, CA 92346
877-838-6726 FAX 909-862-2490
WWW.ORCO.COM



DESCRIPTION

FACTORY BLENDED, THIN SET MORTAR DESIGNED FOR BONDING SIMI-VITREOUS AND VITREOUS CERAMIC TILE, PRECAST CONCRETE, THIN BRICK, NATURAL STONE AND SIMILAR VENEERS OR PAVERS. PROVIDES EXCELLENT WORKING PROPERTIES AND HIGH BOND STRENGTHS. IT IS SUITABLE FOR INTERIOR OR EXTERIOR APPLICATIONS ON RESIDENTIAL, COMMERCIAL, OR INSTITUTIONAL PROJECTS. MAY BE USED ON FLOORS OR WALLS. WHEN MIXED WITH WATER IT MEETS ANSI 118.1 BOND REQUIREMENTS AND 118.4 AND 118.11 WHEN MIXED WITH R-FLEXAD ACRYLIC ADDITIVE.

COLORS

AVAILABLE IN GRAY, WHITE AND SPECIAL ORDER COLORS FOR INDIVIDUAL PROJECT REQUIREMENTS.

USES

A DRY SET BONDING MORTAR FOR THE INSTALLATION OF CERAMIC TILE, QUARRY TILE, THIN BRICK, PRECAST CONCRETE, NATURAL STONE AND SIMILAR VENEERS AND PAVINGSTONES. IT MAY BE USED ON INTERIOR OR EXTERIOR RESIDENTIAL, COMMERCIAL, OR INSTITUTIONAL PROJECTS. REFER TO PRODUCT APPLICATION AND LIMITATIONS SECTION.

ADVANTAGES

- HIGH BOND STRENGTHS
- INTERIOR OR EXTERIOR APPLICATIONS
- WALL OR FLOORS
- EXCELLENT WORKABILITY AND COVERAGE
- WITH WATER MEETS ANSI 118.1 BOND STRENGTH
- WITH R-FLEXAD MEETS ANSI 118.4 AND 118.11 BOND STRENGTH

PACKAGING

AVAILABLE IN 50 LB. MOISTURE RESISTANT BAGS. SHELF LIFE FOR UNOPENED CONTAINERS WHEN STORED IN A COOL DRY PROTECTED AREA IS APPROXIMATELY 6 MONTHS.

COVERAGE

PER 50 LB. BAG MIXED WITH APPROXIMATELY 1 ½ GALLONS CLEAN WATER. USING A SQUARE NOTCHED TROWEL.

1/4" x 1/4" x 1/4" (6x6x6 MM)	80-95 sq. FT.
1/4" x 3/8" x 1/4" (6x9.5x6 MM)	90-70 sq. FT.
1/2" x 1/2" x 1/2" (13x13x13 MM)	35-50 sq. FT.

LIMITATIONS

NOT RECOMMENDED FOR GREEN MARBLE OR WATER SENSITIVE NATURAL STONE. APPLY IN THIN APPLICATION (<1/2"). AVOID APPLICATIONS IN HIGH HEAT, COLD OR WIND (FOLLOW ANSI AND ASTM RECOMMENDATION). DO NOT APPLY WHEN TEMPERATURES ARE BELOW OR EXPECTED TO FALL BELOW 40°F PRIOR TO CURE. SUBSTRATE MUST BE SOUND. ANY CRACKS OR EXCESSIVE MOVEMENT MAY TELEGRAPH THRU MORTAR OR CAUSE



BOND FAILURE. ALWAYS PERFORM QUALITY CONTROL TESTING BEFORE AND DURING APPLICATION. PERIODICALLY REMOVE MASONRY UNIT SHORTLY AFTER INSTALLATION TO ASSURE AN EQUAL AMOUNT OF MORTAR IS BONDING TO THE VENEER AND THE SUBSTRATE. FOLLOW LOCAL BUILDING CODE REQUIREMENTS.

TECHNICAL DATA

COMPOSITION: VBM MORTAR CONTAINS PORTLAND II/V CEMENT ASTM C150, WASHED MASONRY SAND ASTM C144, TYPE S LIME ASTM C207, R-MORTAR AID AND PROPRIETARY POLYMER ADDITIVES. ALL VBM MORTARS MEET THE PROPERTY SPECIFICATIONS OF ASTM C270 TYPE S. COMPRESSIVE STRENGTH SPECIMENS MUST BE AIR CURED FOR 7 DAYS PRIOR TO TESTING DUE TO THEIR HIGH WATER RETENTION AND WATER REPELLENCY PER ANSI 118.1. ALL VBM MORTARS EXCEED IBC AND CBC REQUIREMENTS OF A MINIMUM OF 50 PSI SHEER BOND STRENGTH REQUIREMENTS ASTM C482 MODIFIED. VBM EXCEEDS THE SHEER BOND STRENGTH REQUIREMENTS OF ANSI 118.1 TILE 1/4" THICK >200 PSI. ALL POLY VBM MORTARS EXCEED THE SHEER BOND STRENGTH REQUIREMENTS OF ANSI 118.4. LATEX MODIFIED MORTARS TILE 1/4" THICK >300 PSI.

INSTALLATION

SUBSTRATES: THE SUBSTRATE MUST BE STRUCTURALLY SOUND AND CONFORM TO GOOD ENGINEERING PRACTICES. SUBSTRATE DEFLECTION UNDER ALL LIVE, DEAD AND IMPACT LOADS, INCLUDING CONCENTRATED LOADS MUST NOT EXCEED L/360 FOR THIN BED INSTALLATION OR L/480 FOR THICK BED STONE INSTALLATIONS, WHERE L= SPAN LENGTH. INSTALLATIONS SHALL BE IN ACCORDANCE WITH IBC, ANSI, CBC AND LOCAL BUILDING CODES. MOVEMENT JOINTS SHALL BE BROUGHT THRU MORTAR AND VENEER TO THE SURFACE. ALL SURFACES MUST BE SOUND, CLEAN, AND FREE FROM ANY DIRT, OIL, PAINT, BOND BREAKERS, EFFLORESCENCE OR ANY CONTAMINANTS WHICH MAY HINDER BOND. CONSULT CEMENT BACKER BOARD MANUFACTURER FOR SPECIFIC INSTALLATION RECOMMENDATIONS AND TO VERIFY ACCEPTABILITY FOR EXTERIOR USE. A SUITABLE SUBSTRATE FOR BONDING DOES NOT MEAN IT IS ACCEPTABLE FOR ALL VENEERS OR JOB CONDITIONS.

SUITABLE SUBSTRATES: PROPERLY PREPARED AND SOUND.

- PREPARED CONCRETE (PREPARED)
- CONCRETE MASONRY (UNTREATED)
- CEMENT PLASTER
- CEMENT MORTAR BEDS
- GYPSUM BOARD (DRY INTERIOR WALLS ONLY)
- EXISTING CERAMIC TILE & MARBLE (W/ R-FLEXAD ONLY)
- EXTERIOR GRADE PLYWOOD (INTERIOR W/ R-FLEXAD ONLY)
- PORTLAND CEMENT BACKER BOARD (PREPARED)

LATH AND CEMENT PLASTER: SHALL CONFORM TO IBC, CBC, ASTM GUIDELINES AND VENEER MANUFACTURERS REQUIREMENTS. ALLOW TO CURE 24 HOURS PRIOR TO APPLICATION. WE RECOMMEND OBP MAC SCRATCH AND BROWN PREMIUM TO PROVIDE A HIGH STRENGTH PLASTER SUBSTRATE.

POURED IN PLACE CONCRETE (PREPARED) AND TILE UP CONCRETE (PREPARE): INSURE ALL RELEASE AGENTS AND BOND BREAKERS ARE COMPLETELY REMOVED. MORTAR WILL NOT BOND TO SURFACES WITH ANY BOND BREAKERS STILL ON THE SUBSTRATE. THIS IS BEST ACHIEVED BY REMOVAL OF THE SURFACE LAYER BY BEAD BLASTING, SANDING, GRINDING OR EQUIVALENT. SMOOTH CONCRETE MUST BE ROUGHENED. HIGH-PRESSURE WASHING IS TYPICALLY NOT ADEQUATE FOR COMPLETE REMOVAL OF BOND BREAKERS OR RELEASE AGENTS. DAMPEN THE SURFACE JUST PRIOR TO APPLICATION, BUT DO NOT ALLOW WATER TO PUDDLE.

CEMENT BACKER BOARD (PREPARED): ALL JOINTS MUST BE TAPED WITH FIBERGLASS (OR EQUAL) TAPE AND VBM BONDER, R-LASTIC OR EQUAL. CONSULT CEMENT BACKER BOARD MANUFACTURER FOR SPECIFIC INSTALLATION RECOMMENDATIONS AND LIMITATIONS. A SUITABLE SUBSTRATE FOR BONDING DOES NOT MEAN IT IS ACCEPTABLE FOR ALL VENEERS OR JOB CONDITIONS.

CERAMIC TILE SUBSTRATES: EXISTING TILE MUST BE SOUND, WELL BONDED, CLEAN AND FREE OF ANY DELETERIOUS SUBSTANCE THAT MAY PREVENT ADHESION. SMOOTH SURFACES REQUIRE ROUGHENING TO PROMOTE BONDING. REPLACE THE MIX WATER WITH R-FLEXAD ACRYLIC ADDITIVE.

PLYWOOD SUBSTRATES: INTERIOR APPLICATIONS ONLY. USE ONLY OVER EXTERIOR GRADE PLYWOOD (EGP) 5/8" MINIMUM. WOODEN FLOORING SHOULD NOT HAVE A DEFLECTION EXCEEDING 1/360 OF SPAN IN EITHER DEAD OR LIVE LOADS. SECURING SHOULD BE DONE WITH SCREW-TYPE NAILS AND GLUE. A 3/16" GAP FOR EXPANSION SHOULD BE LEFT ABOUT THE PLYWOOD SHEETS AND SURROUNDING MATERIALS. THESE GAPS SHOULD BE LEFT EMPTY AFTER THE INSTALLATION. REPLACE THE MIX WATER WITH R-FLEXAD ACRYLIC ADDITIVE.

CONTROL JOINTS: NEVER APPLY MORTAR OVER ANY EXPANSION OR CONTROL JOINTS. FOR MORE INFORMATION SEE TCNA (TILE COUNCIL OF NORTH AMERICA) HANDBOOK AND EJ171.

MIXING

ADD 50 LB. BAG OF MORTAR TO APPROXIMATELY 1 1/2 GALLONS OF CLEAN POTABLE WATER. MIX BY HAND OR A LOW SPEED MIXER. AVOID WHIPPING AIR INTO THE MIX. HIGH AIR LOWERS STRENGTH. MIX MATERIAL THOROUGHLY AND ALLOW TO SET FOR 10 MINUTES AND THEN REMIX. DO NOT ADD ADDITIONAL WATER. FOR GREATER FLEXURAL BOND STRENGTHS, REPLACE THE MIX WATER WITH R-FLEXAD ACRYLIC ADDITIVE. FOR SLURRY BOND COAT APPLICATION MIX WITH APPROXIMATELY 7 QUARTS OF WATER PER 50 LB. BAG.

APPLICATION

APPLY MORTAR TO THE SUBSTRATE WITH THE FLAT SIDE OF A NOTCHED TROWEL. FIRMLY PRESS MORTAR KEYING INTO THE SUBSTRATE. APPLY ADDITIONAL MORTAR USING THE NOTCHED SIDE OF THE TROWEL. SPREAD ONLY AS MUCH MORTAR AS CAN BE COVERED IN 10-15



MINUTES. USE THE CORRECT SIZE NOTCHED TROWEL TO MAKE SURE VENEERS ARE FULLY EMBEDDED (100% COVERAGE). PLACE TILE OR VENEERS INTO THE WET MORTAR AND BEAT INTO PLACE. DO NOT APPLY TO SKIMMED OVER MORTAR. BACK BUTTER LARGE VENEERS. ASSURE FULL COVERAGE AND BOND BY PERIODICALLY REMOVING AND INSPECTING THE BACK OF TILE. TILE OR VENEER THAT HAVE BEEN SET FOR MORE THAN 10-15 MINUTES CANNOT BE RE-ADJUSTED.

CLEAN-UP: CLEAN TOOLS AND TILE WITH WATER PRIOR TO MORTAR CURING.

GROUTING: CURE THE FRESHLY APPLIED MATERIAL FOR AT LEAST 24 HOURS. CURING TIME MAY VARY DUE TO SURFACE AND AMBIENT TEMPERATURES.

RELATED PRODUCTS

VBM BONDER: PREMIUM POLYMER MODIFIED THINSET

R-FLEXAD: ACRYLIC BONDING ADDITIVE

VP JOINT GROUT: JOINT GROUT WITH FINE SAND

R-LASTIC: WATERPROOFING AND ANTI-FRACTURE COATING

MAC SCRATCH & BROWN PREMIUM: HIGH STRENGTH POLYMER CEMENT PLASTER

AVAILABILITY / TECHNICAL SERVICES

CONTACT ORCO BLENDED PRODUCTS FOR DEALERS IN YOUR AREA AND TECHNICAL SERVICES AT 877-838-6726.

CAUTION

PROLONGED EXPOSURE TO DUST MAY CAUSE DELAYED LUNG DISEASE. ELIMINATE EXPOSURE TO DUST. USE NIOSH APPROVED MASK FOR SILICA DUST. FRESHLY MIXED MATERIALS MAY CAUSE SKIN IRRITATION. AVOID DIRECT CONTACT WHERE POSSIBLE AND WASH EXPOSED SKIN AREAS PROMPTLY. IF ANY CEMENTITOUS MATERIALS GETS INTO THE EYES, RINSE IMMEDIATELY AND REPEATEDLY WITH WATER AND GET PROMPT MEDICAL ATTENTION. SEE SDS.

WARRANTY

THE TECHNICAL INFORMATION AND USAGE STATEMENTS ARE BASED ON OUR BEST KNOWLEDGE. THE CONTENTS OF THIS SPECIFICATION SHEET ARE PRESENTED FOR INFORMATIONAL PURPOSES ONLY AND DO NOT CONSTITUTE RESPONSIBILITY FOR THEIR USE. THE MANUFACTURER WILL REPLACE ONLY THAT MATERIAL WHICH IS PROVEN DEFECTIVE DUE TO QUALITY OF THE COMPONENTS OR THE MANUFACTURING PROCESS.

PRODUCT DATA SHEETS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION. TEST RESULTS SHOWN ARE TYPICAL BUT FIELD PERFORMANCE WILL VARY DEPENDING ON INSTALLATION METHODS AND JOB CONDITIONS. *MAC AND VBM MORTARS ARE A TRADEMARK OF R-CRETE INC.