

PRODUCT DESCRIPTION

Tuflex® Spartus Multipurpose Sports flooring tiles, developed for sports and commercial applications, have been proven in the industry since 1957. Manufactured using a simultaneous vulcanization process and a new, industry-leading Red List chemical free formulation that is FREE of tire-derived crumb rubber – the first in the industry!

TECHNICAL DATA

Nominal Dimensions - Square Edge: **27" x 27" x 3/8" (9mm), 5.06 sq. ft. per tile**

Nominal Dimensions - Interlocking: **25 3/4" x 25 3/4" x 3/8" (9mm), 4.6 sq. ft. per tile**

Surface Texture - **Smooth**

Area per Tile - **5.06 sq. ft. (square edge), 4.6 sq. ft. (interlocking)**

ASTM D2047 - **Coefficient of Friction: >0.8**

ASTM E648 - Critical Radiant Flux: **Class I, >0.45 W/cm2**

ASTM D2240 - Hardness: **Shore A; 70 +/- 5**

ASTM F970 - Static Load Limit: **Pass, > 250 PSI**

ASTM F970 – Static Load Limit: Modified for Max Weight: **1,000 PSI**

ASTM F1515 – Light Stability: **Passes ΔE < 8**

ASTM E90 - Sound Transmission Loss: **52 STC*, 63 STC****

ASTM E492 - Impact Sound Transmission: **52 IIC*, 67 IIC****

ASTM E2179 - Delta Impact Insulation: **22 ΔIIC***

Storage & Acclimation Temperature: **65° - 85° F**

Acclimation Time: **48 Hours in Service Conditions**

** 6" Concrete, No Drop Ceiling, ** 6" Concrete with Drop Ceiling*

Sustainability Information: [FloorScore Certificate Available](#), [HPD Available](#), [NSF 332 Platinum](#), **Qualifies for LEED Credits, Recyclable through the [Roppe Impact Program](#)**

Technical Documentation: visit www.roppe.com or send an e-mail to support@roppe.com.

Technical Support: solutions@rhctechnical.com

ADHESIVES & ITEMS FOR INSTALLATION

[Excelsior MS-700 Modified Silane Adhesive](#)- Single Component Modified Silane is a great all around option for both interior and exterior applications. High resistance to moisture and pH. Very aggressive bonding.

[Excelsior EW-710 Epoxy Wet-Set Adhesive](#) - Two-Part Urethane enhanced epoxy, a great option for installations where a hard set adhesive is needed. Recommended where topical moisture, rolling loads and free weights are excessive. Approved for interior and exterior applications.

Approved Cleaners, Finishes & Finish Removers

[Excelsior NC-900 All Purpose Neutral Cleaner](#) – a pH neutral, cleaner for the initial and daily cleaning of all Rubber and Vinyl Resilient flooring materials.

[Excelsior CM-910 Cleaner / Maintainer](#) - A pH neutral, biodegradable cleaner and maintainer for the daily cleaning or long-term preservation of rubber flooring products.

[Excelsior PF-960 Performance Finish](#) – A flexible floor finish developed for use over resilient flooring products, specifically for crumb rubber flooring products.

[Excelsior PR-930 Performance Finish Remover](#) – a finish remover specifically designed to remove topically applied flooring finishes from resilient flooring products that are sensitive to alkalinity, such as rubber flooring and crumb rubber flooring.

Approved Substrates When Properly Prepared

Concrete, Wood, Metal, Terrazzo, Marble, Ceramic Tile

Non-Approved Substrates

VCT, Vinyl Flooring, Rubber Flooring, Linoleum Flooring, Linoleum, and/or other resilient products

Adhesive Coverage Rates and Traffic Limits						
Coverage Rates (per gallon)				Traffic Limits		
Adhesive	Porous	Non-Porous	RH / MVER Limits	Foot Traffic	Heavy Foot Traffic, Rolling Loads	Maintenance
MS-700	135 sq. ft.	160 sq. ft.	95% / 10 lbs.	8 – 12 Hours	24 - 48 Hours	48 Hours
	Brushed & Rough Porous	Smooth Porous & Non-Porous				
EW-710	120 sq. ft.	135 sq. ft.	90% / 6 lbs.	8 – 12 Hours	24 – 48 Hours	72 Hours

SUBSTRATE, INSTALLATION & MAINTENANCE INFORMATION

1. PRODUCT LIMITATIONS

- Do not install materials over LVT, cushioned vinyl, hardwood flooring, cork, rubber, or asphaltic materials.
- Do not install in areas that may be subjected to sharp, pointed objects, such as pointed metal spikes. When installing in areas that may be exposed to ice skates, ensure skate guards are worn. Product is not intended for use in areas that may be subjected to deliberate abuse and damage.
- Do not allow product to be directly exposed to extreme heat sources, such as radiators, ovens or other high-heat equipment.
- May be susceptible to staining from rubber tires, casters or rubber-backed walk-off mats, as well as harsh disinfectants, cleaning agents, dyes or other harsh chemicals – ensure all chemicals and materials that may come in contact with flooring surface will not stain, mar or otherwise damage the flooring material prior to use.
- Not to be used in Commercial Kitchens or other areas subjected to animal, vegetable or petroleum based oils and solvents. Flooring material must receive a floor finish prior to final usage.

2. PRE-INSTALLATION

- Consult all associated product literature concerning adhesive installation, maintenance and warranty prior to installation of flooring. Ensure installation area and material storage temperatures are between 65° F (19° C) and 85° F (30° C) for at least 48 hours before, during and after installation.
- Allow all trades to complete work prior to installation.
- Deliver all materials to the installation location in its original packaging with labels intact.
- Do not stack pallets to avoid damage. Remove any plastic and strapping from product after delivery.
- Inspect all material for proper type, color and matching lot numbers if appropriate. Ensure that all adhesives intended for installation are approved for use with flooring material. Ensure HVAC system is operational and fully functioning at normal operating conditions.
- Protect installation area from extreme temperature changes, such as heat and freezing, as well as direct sunlight for at least 48 hours before, during and after installation.
- Ensure all substrate preparation and moisture testing requirements have been performed, read and/or understood by all interested parties.

- Do not proceed with installation until all conditions have been met.

3. ACCLIMATION & SERVICE ENVIRONMENT

- Ensure installation area and material storage temperatures are between 65° F (19° C) and 85° F (30° C) for at least 48 hours before, during and after installation. Ensure HVAC system is operational and fully functioning at normal operating conditions.
- We recommend maintaining a minimum service temperature of 55° F (13° C) and a maximum of 95° F (35° C) while maintaining an ambient relative humidity between 40% and 60% after installation.

4. SUBSTRATE PREPARATION

All substrates must be prepared according to ASTM F710, as well as applicable ACI and RFCI guidelines. Substrates must be clean, smooth, permanently dry, flat, and structurally sound. Substrates must be free of visible water or moisture, dust, sealers, paint, sweeping compounds, curing compounds, residual adhesives and adhesive removers, concrete hardeners or densifiers, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material or foreign matter.

All substrates must have any and all existing adhesives, materials, contaminants or bond-breakers mechanically removed via scraping, sanding, grinding or buffing with a 25 grit DiamaBrush Prep Plus tool prior to adhesive installation. In extreme situations, shotblasting may be required. Mechanical preparation must expose at least 90% of the original substrate. Following cleaning and removal, all substrates must be vacuumed with a flat vacuum attachment or damp mopped with clean, potable water to remove all surface dust. Sweeping without vacuuming or damp mopping will not be acceptable.

All porous substrates must be tested per ASTM F3191 to confirm porosity. Use a pipette or equivalent to conduct three tests by placing a .05 mL (1/4" wide) droplet of clean, potable water onto the surface. If the substrate completely absorbs water within 60 seconds, the substrate is considered porous. Conduct 3 tests for the first 3000 sq. ft. and one for each additional 2000 sq. ft., at least one per room. All other substrates that do not meet this requirement are considered non-porous. Ensure that all non-porous substrates are not contaminated with any aforementioned contaminants.

It is recommended that all substrates have a floor flatness of FF32 and/or a flatness tolerance of 1/8" in 6' or 3/16" in 10'. Substrates that do not meet this requirement should have a compatible cementitious patch (such as the Excelsior CP-300) or self-leveling underlayment (such as the Excelsior SU-310) installed to flatten the installation area.

Do not use solvent/citrus based adhesive removers prior to installation. Follow The Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesive", and all applicable local, state, federal and industry regulations and guidelines. When removing asbestos and asbestos containing materials, follow all applicable OSHA standards.

CONCRETE SUBSTRATES

All concrete must have a minimum compressive strength of 3500 PSI and be prepared in accordance with ASTM F710. When flooring is being installed directly over concrete, concrete surfaces that have an ICRI Concrete Surface Profile (CSP) over 4 should be flattened with a self-leveling underlayment or a patch to prevent imperfections from telegraphing through flooring materials. On or below grade concrete must have a permanent, effective moisture vapor retarder installed below the slab.

New or existing concrete substrates on all grade levels must be tested in accordance with ASTM F2170, using in situ Probes, to quantitatively determine the amount of relative humidity no more than one week prior to the installation.

In addition to ASTM F2170 Relative Humidity Testing, existing concrete that has previously had floor covering installed on all grade levels must be tested in accordance with ASTM F1869, using Calcium Chloride test kits, to quantitatively determine the Moisture Vapor Emissions Rate (MVER) of the concrete.

If ASTM F2170 or ASTM F1869 test results exceed the prescribed limits, a moisture mitigation product, such as Excelsior MM-100 Moisture Mitigation, must be installed prior to proceeding with installation. Install The MM-100 per technical data sheet at a rate of 400 sq. ft. per gallon. When installing over concrete as moisture mitigation, material must be applied in two coats. Do not install flooring until moisture testing has been conducted per the appropriate standard and/or moisture mitigation has been installed and is dry to the touch. Do not install flooring in below grade areas when hydrostatic pressure is visible or suspected.

RESINOUS SUBSTRATES

When installing directly over a resinous products, such as the Excelsior MM-100 or an epoxy coating, ensure that coating is dry to the touch and has cured for the prescribed length of time. Substrate must be clean, dry, sound and free of contaminants. Make sure existing resinous substrates are well bonded. Always follow installation procedures and trowel sizes for non-porous substrates.

GYPSUM BASED SUBSTRATES

Gypsum-based substrates must have a minimum compressive strength of 3500 PSI. Gypsum substrates that do not meet this requirement must have one coat of the Excelsior MM-100 or equivalent installed to improve the tensile/pull-off strength of the substrate. Substrate must be structurally sound and firmly bonded to subfloor. Any cracked or fractured areas must be removed and repaired with a compatible patch or repair product. Follow instructions for installation over a gypsum substrate. New or existing gypsum substrates may require a sealant or primer. Follow all manufacturers' recommendations regarding preparation for resilient flooring installation.

WOOD SUBSTRATES

Wood substrates must be prepared in accordance with ASTM F1482. Wood subfloors should be of double layer construction with a minimum thickness of 1". Crawl spaces beneath wood subfloors shall be in compliance with local building ventilation codes and have at least 18" of cross-ventilated space between the ground and the joists. Wood joists should be spaced on not more than 16" centers. Prior to installation, moisture retardant sheeting with a maximum rating of 1.0 perm must be installed beneath the wood subfloor, overlapped at least 8". For standard installations, use Underlayment Grade plywood with a minimum thickness of 1/4" thick and a fully sanded surface. When floors may be subjected to moisture, use an APA approved exterior grade plywood.

Other wood subfloor materials, such as OSB, lauan, particleboard, chipboard, fiberboard or cementitious tile backer boards, are not acceptable substrates. Avoid preservative-treated and fire-retardant plywood, as some may be manufactured with resins or adhesives that may cause discoloration or staining of the flooring. Do not install flooring directly over solid or engineered hardwood flooring without first installing plywood or a suitable cementitious repair product at a minimum thickness of 1/4" over the hardwood flooring.

Wood subfloor deflection, movement, or instability will cause the flooring installations to release, buckle or become distorted. As such, do not use plastic or resin filler to patch cracks. Do not use cement or rosin coated nails and staples or solvent-based construction adhesives to adhere the plywood. Do not install on a sleeper system (wood subfloor system over concrete) or directly over Sturd-I-Floor panels.

METAL SUBSTRATES

Metal substrates must be thoroughly sanded/ground and cleaned of any residue, oil, rust and/or oxidation. Substrate must be smooth, flat and sound prior to installation. When installing in areas that may be subject to topical water or moisture and/or high humidity, an anti-corrosive coating must be applied to protect metal substrate. Contact a local paint or coating supplier for

coating recommendations. Install flooring material within 12 hours after sanding/grinding to prevent re-oxidation. Any deflection in the metal floor can cause a bond failure between the adhesive and the metal substrate. Always follow installation procedures and trowel sizes for non-porous substrates.

EXISTING FLOORING SUBSTRATES

The suitability of existing flooring as a substrate depends on the specific requirements of the adhesive being used to install the material. As such, refer to the adhesive requirements for existing flooring substrates and ensure all adhesive requirements and guidelines are followed.

RADIANT HEATING SUBSTRATES

When installing flooring over a substrate that contains a radiant heating system, ensure the radiant heat is turned off 48 hours prior to installation and remains off during the entire installation. 48 hours after installation, the radiant heat may be gradually increased over the course of 24 hours, until normal operating temperature is reached. Ensure the temperature of the radiant heating system does not exceed 85° F (29.5° C) and avoid making abrupt changes in radiant heating temperature.

4. CRACKS, JOINTS & VOIDS

All cracks, joints and voids, as well as the areas surrounding them, must be clean and free of dust, dirt, debris and contaminants. All minor cracks and voids 3/64" wide or less may be repaired with a suitable cementitious patch.

Due to the dynamic nature of concrete slabs, manufacturer cannot warranty installations to cover expansion joints, cracks or other voids (such as control cuts, saw joints and moving cracks or voids) wider than 3/64". Do not install flooring directly over any expansion joints or cracks wider than 3/64".

All expansion joints should have a suitable expansion joint covering system installed to allow expansion joint to freely move. To treat expansion joints (where an expansion joint covering system can't be installed or to treat through cracks; depth at least 75% of the thickness of the concrete), chase joint or crack with a suitable saw or grinder and open to a minimum width of 1/4". Be sure to clean all dust, dirt and debris from crack. Joints and cracks should then be sealed with a suitable, elastomeric caulk (such as Ardex Ardiseal Rapid Plus, Mapei P1 SL or equivalent) designed for use in expansion joints. Install a closed-cell backer rod at prescribed depth and follow caulk manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

To treat other cracks and voids (such as control cuts, saw-cut joints and surface cracks) over 3/64", chase joint or void with a suitable saw or grinder and clean all dust, dirt and debris from crack. Fill entire crack with a rigid

crack filler (such as Ardex Ardifix, CMP CM10 or equivalent) designed for use in control or saw-cut cuts. Follow material manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

Consult a structural engineer prior to treating any crack or joint, especially those that may affect structural integrity (such as expansion joints). Review all manufacturer installation instructions and/or consult manufacturer technical staff for all crack and joint filling products prior to treating joints and cracks.

5. INTERLOCKING INSTALLATION

Ensure substrate is suitably prepared prior to installation, as manufacturer is not responsible for substrates that have not been properly prepared and tested for moisture. Indoor installations of interlocking tile are recommended to be loose-lay without adhesive, however adhesive can be used if required. All outdoor installations of interlocking tile require a full spread of the approved adhesives above; use square edge tile installation instructions for these installations.

Ensure substrate is clean, dry and sound prior to installation. Square installation area using the 3-4-5 squaring rule or similar method to ensure acceptable installation and establish initial installation starting line. Some flooring products, colors and textures have latent and acceptable color and shade variations. Dry-lay material prior to installation to verify that there are no visible defects, damages or excessive shading variations. For larger installations, material should be blended between cartons and pallets to ensure a uniform appearance. If there are concerns regarding shade or color variation, do not install material and consult sales agent and manufacturer's technical staff. Interlocking tiles will only interlock in one direction. Tabs will not line up if reversed or 'quarter-turned'.

Whenever possible, avoid installing flooring seams directly over seams in the substrate. Borders and perimeter pieces should be no less than 1/2" the width of the tile and should be no less than 1/8" from the wall, depending on depth of wall base or trim, to allow for expansion.

Borders and other specialty cut tiles should be undercut to fit snugly, not tightly, against thresholds, transition strip, fixtures, door jambs or other obstacles; forcing incorrectly sized tiles into smaller areas will cause the tile to buckle.

Roll material with a 3 section, 100 lb. roller to ensure all tiles are properly interlocked, crossing in a perpendicular direction after initial roll. Use a hand roller in areas that cannot be reached with larger roller. Visually inspect installation to ensure that material has not shifted and all seams are tight and flat. To finish open edges of

interlocking tile or areas intended to butt to another flooring material, use a straight edge to remove male ends of tile and install appropriate finishing accessory.

6. SQUARE EDGE INSTALLATION

Ensure substrate is suitably prepared prior to installation, as manufacturer is not responsible for substrates that have not been properly prepared and tested for moisture. Ensure adhesive is approved for use with flooring material and the proper trowel type and size is used, as manufacturer is not responsible for any adhesion issues related to improper adhesive selection or usage. Prior to installation, confirm material installation pattern and direction per design specifications or work order. Square Edge tile should be installed in an ashlar or brick pattern to ensure tight seams and an overall ideal visual appearance.

Inspect and dry lay all tiles before installing to verify that there are no visible defects, damages or excessive shading variations. Some flooring products, colors and textures have latent and acceptable color and shade variations. If there are concerns regarding shade or color variation, do not install material and consult a sales representative and manufacturer's technical staff.

Ensure substrate is clean, dry, and flat and sound prior to installation. Square the room using the 3-4-5 squaring rule or similar method to ensure acceptable installation and establish initial installation starting line. Dry-lay several tiles to establish the best layout for the installation area and facility and ensure equal tile sizes are used around the perimeter. Allow a 1/8" gap around the entire perimeter of the room to allow for expansion, ensuring gap is no wider than the trim, wall base or molding to be installed. Cut borders and other specialty pieces to fit snugly against or around walls, thresholds, transition strips, fixtures and other protrusions or accessories. Avoid forcing material tightly against vertical surfaces, as material may buckle.

Use a nail-down guide or equivalent along starting row to expedite wet-set installation. Apply adhesive according to instructions for specific product in use and observe adhesive flash times, if applicable. Ensure all adhesive working times are observed and followed. Be sure to follow instructions based on substrate porosity (porous or non-porous). Use chart on page 2 for reference.

Install material into adhesive and observe directional arrows on back of tile to ensure arrows are installed in the same direction, unless installing in a specific and pre-determined design, such as a quarter-turn design. Use a pyramid layout when installing tiles to eliminate run-off.

When installing into adhesive using a wet-set method, avoid walking or working on material until adhesive has cured for light foot traffic. *Working on material that is installed into wet adhesive could cause adhesive to*

displace. When working off of material is not possible, use a kneeling board or equivalent to disperse weight evenly and prevent adhesive displacement. Pay close attention to working time to avoid adhesion issues. This may require installing material in smaller sections. Replace trowels at recommended intervals to maintain proper trowel ridge and spread rate.

Periodically lift material to ensure proper adhesive transfer and ensure adhesive has not surpassed the open time – adhesive should cover 90% of tile. Roll material with a 3 section, 100 lb. roller within 30 minutes of installation, crossing in a perpendicular direction after initial roll. Use a hand roller in areas that cannot be reached with larger roller. Do not wait until completing the entire installation before rolling, the adhesive may surpass the open time and cure. Roll and cross-roll a second time approximately 30 mins. after the initial rolling.

Visually inspect installation to ensure that material has not shifted and that adhesive has not been squeezed out of joints or compressed onto surface. Clean excessive adhesive or adhesive residue from the surface of the material per adhesive recommendations. Do not apply abrasive or solvent based cleaners directly to flooring material.

7. ICE RINK INSTRUCTION

Tuflex Spartus may be installed in and around ice rinks; however, certain precautions must be followed to ensure successful installation. Ensure substrate is clean, dry, flat and sound prior to installation – give standing water or condensation time to dry prior to installation. Ensure substrate temperature is above 40° F (4° C) to allow adhesive to properly cure. Do not fill voids between the concrete slab and the ice slab, as this void is necessary for expansion and contraction. When butting directly to ice rink walls or boards, the Tuflex flooring may be used to bridge these voids. Due to the oval shape of most ice rinks and arenas, there may be several small cut tiles around the perimeter – ensure all small cut tiles are well adhered.

In areas where skate traffic is expected, ensure skate guards are worn to prevent damaging tile.

8. INITIAL MAINTENANCE

Ensure that adhesive has cured for recommended period of time prior to conducting initial maintenance. Remove any protective coverings prior to cleaning. Sweep, use dust mop and/or vacuum to remove any dirt, dust or debris from flooring.

Mix 2-4 ounces of Excelsior NC-900 Neutral Cleaner per gallon of clean, potable water. Use a clean mop to apply cleaning solution to floor and let stand for 5-10 minutes.

Using a low-speed Rotary floor machine (175 – 350 RPM) scrub floor while still wet using a 3M 5300 Blue

Cleaning Pad. If flooring is heavily soiled, an additional cleaning may be required. Use an auto-scrubber, wet vacuum or clean mop to remove any and all excess cleaning solution. Rinse area with clean, cool water and allow floor to dry entirely. Ensure flooring area is clean and that all cleaning residue has been removed (this may require additional rinsing).

Do not use detergents, abrasive cleaners or “mop and shine” type products; they will dull the finish and sheen of the flooring material. Do not use vacuums that have a beater bar or electric brooms with hard plastic bottoms or no padding, as this may cause discoloration, scratching and loss of sheen.

For further information regarding daily or routine maintenance, please consult the product care & maintenance document.

9. FINISH APPLICATION

If Tuflex Spartus will be installed in an area where regular maintenance procedures will not be performed, a floor finish must be applied. Ensure that initial maintenance has been conducted prior to applying floor finish. Flooring area must be free of dust, dirt, debris, adhesive or cleaning residues, mold release agents and any potential contaminants.

A finish is not required in ice rink applications, the skates will scratch and/or mar the finish.

Apply Excelsior PF-960 Performance Finish per the installation instructions in 3-4 coats. If more of a semi-gloss appearance is desired apply 1-2 additional coats. Allow each coat to dry completely before applying additional coats.

For further information regarding finish application, please consult the product care & maintenance document.

10. FLOORING PROTECTION

Protect newly installed flooring with construction grade paper or protective boards, such as Masonite or Ram Board, to prevent flooring damage, especially by other trades. Limit usage and foot traffic according to the adhesive's requirements (see chart on page 2). When moving appliances or heavy furniture, protect flooring from scuffing and tearing using temporary floor protection.

All furniture casters must be made of a soft material and must have a contact point of at least 1” in width to limit indentation and flooring damage. All rolling chairs or seating must have a resilient flooring chair pad installed over the finished floor to protect floor covering. All fixed furniture legs must have permanent felt or soft rubber floor protectors installed on all contact points to reduce indentation. Floor protectors must have a flat contact point of at least 1” in width and must cover the entire bottom surface of the furniture leg.

Ensure all furniture castors and chair legs are clean and free of any and all dirt and debris. Routinely clean chair castors and furniture legs to ensure that dirt or debris has not built up or become embedded in castors or floor protectors. Replace chair castors and floor protectors at regular intervals, especially if they become damaged or heavily soiled.

Place walk-off mats at outside entrances. Ensure mats are manufactured with non-staining backs to prevent discoloration.

11. WARRANTY

Roppe provides a 10 Year Limited Warranty along with a Lifetime Delamination Warranty.

For additional information, see associated warranty documents.

FOR PROFESSIONAL USE ONLY

PLEASE CONSULT ALL ASSOCIATED TECHNICAL DATA SHEETS, SAFETY DATA SHEETS, MAINTENANCE DOCUMENTS, AND WARRANTY INFORMATION PRIOR TO INSTALLATION.