Product Description

Roppe Envire Rubber Sheet is a smooth surfaced, homogeneous rubber sheet designed for permanent flooring installations. The natural durability and dimensional stability of Envire sheet rubber make this flooring ideal for most high traffic commercial installations. Envire’s quality rubber composition provides a quiet and extremely comfortable walking surface that has excellent resistance to abrasion, impact, scuffs, gouging, burns and most chemicals. Although rugged and durable, it is also flexible enough to ease installation. The ability to maintain Envire by dry buffing, rather than using waxes or finishes, decreases the long-term maintenance cost and environmental strain due to chemical use and waste.

Ideal For:

- **Healthcare:** exam rooms, operating rooms, areas that require seamless flooring
- **Education:** athletic facilities, classrooms, gyms
- **Retail Spaces:** showrooms, shopping malls, retail stores
- **Transportation:** train terminals, bus terminals

Features

- PVC Free
- Phthalate Free
- Does Not Require A Finish
- Resistant to Fungi
- Noise-Reducing Material
- Excellent Chemical Resistance
- Excellent Slip Resistance
- Recyclable (*IMPACT Recycling Program*)
- Qualifies for LEED® Credits
- FloorScore® Certified

Technical Data

- **Nominal Dimensions:** 74" x 50' x 2.5mm
- **Nominal Area:** 300 sq. ft.
- **Finish:** Smooth
- **Weight Per Roll:** ~260 lbs.
- **Quantity Per Pallet:** 9 Rolls Per Pallet
- **LEED v2009 IEQ Credit 4.1:** Qualifies
- **LEED v2009 IEQ Credit 4.3:** Qualifies
- **ASTM F1859 – Sheet Rubber Flooring:** Type 1
- **ASTM E648 (NFPA 253) - Critical Radiant Flux:** Class I, > 0.45 W/cm²
- **ASTM E662 (NFPA 258) - Smoke Density:** Passes, < 450
- **ASTM D2240 - Durometer Hardness, Shore A:** Passes
- **ASTM F970 - Static Load Limit:** 1500 PSI
- **ASTM D2047 – Slip Resistance:** Passes
- **ASTM F925 - Chemical Resistance:** Passes (see chart)
- **ASTM D2047 - Abrasion Resistance:** > 0.6
- **ASTM F925 - Chemical Resistance:** Passes
- **ASTM F1514 - Heat Stability:** Excellent
- **ASTM F1515 – Light Stability:** Excellent
- **ASTM F3389 – Abrasion Resistance:** IIC 50*
- **ASTM G21 - Resistance to Fungi:** STC 62*
- **ASTM E492/E989 – Impact Sound:** ΔIIC 11*
- **ASTM E492/E989 – Impact Sound:** 48 Hours
- **ASTM E90 / E413 – Airborne Sound:** 65° - 85° F

Additional Information

- **Approved Adhesives:**
  - SP-500 Aerosol Adhesive*
  - AP-520 Acrylic Pressure Sensitive*
  - AW-510 Acrylic Wet-Set Adhesive
  - MS-700 Modified Silane Adhesive
  - EW-710 Epoxy Wet-Set Adhesive
- **Heat-Welding:**
  - Product may be heat-welded with available rubber welding rods (200' roll, 4mm diameter).
- **Availability, Cost & Samples:**
  - Roppe Flooring products are sold through distribution. To locate the nearest distributor, visit roppe.com or send an e-mail to solutions@rhctechnical.com.
- **Technical Documents & Support:**
  - Additional product resources and technical documents are available online at roppe.com. For additional technical support, send an e-mail to solutions@rhctechnical.com.
1. PRE-INSTALLATION CHECKLIST

- Consult all associated product literature concerning adhesive installation, maintenance and warranty prior to installation of flooring.
- 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.
- Protect installation area from sunlight for at least 48 hours before, during and after installation.
- 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.

2. PRODUCT LIMITATIONS

Do not install materials over LVT, cushioned vinyl, hardwood flooring, cork, rubber, or asphaltic materials. Do not install flooring materials in outdoor areas, residences, in or around commercial kitchens or areas that may be exposed to animal or vegetable fats and oils, grease and petroleum-based hydrocarbons. Do not install in areas that may be subjected to sharp, pointed objects, such as stiletto heels, cleats or spikes. 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.

3. SUBSTRATE PREPARATION

All substrates must be prepared according to ASTM F710, as well as applicable AIC and RFCI guidelines. Substrates must 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 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 adhesives 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.

<table>
<thead>
<tr>
<th>Adhesive RH Limits</th>
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<tbody>
<tr>
<td>SP-500 Acrylic Aerosol: 90% RH</td>
</tr>
<tr>
<td>AW-510 Acrylic Wet-Set: 90% RH</td>
</tr>
<tr>
<td>AP-520 Acrylic Roll-On: 80% RH</td>
</tr>
<tr>
<td>MS-700 Modified Silane: 95% RH</td>
</tr>
<tr>
<td>EW-710 Epoxy Wet-Set: 90% RH</td>
</tr>
</tbody>
</table>

New or existing concrete substrates on all grade levels must be tested in accordance with ASTM F2170, using in situ Probes, to quantitatively determine
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. Ensure to 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 manufacturer’s 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 subfloors. 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 resin 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. Ensure to 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 expansions 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 ¼”. 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 caulking 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 expansion joints. Install a closed-cell backer rod at prescribed depth and follow caulking 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 or joint filling products prior to treating joints and cracks.

5. SHEET PREPARATION

Inspect each roll of material prior to installation 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 sales representative and manufacturer’s technical staff.

Ensure substrate is clean, dry, 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. Ensure to 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.

Do not overlap flooring seams with any seams in substrate. Once seam location is established, layout and rough cut material from roll, overlapping seams by at least ¾” per edge. Vertical seam must be stagger by 3” - 4”, depending on room size and roll length. Seams must be cut prior to installing material with adhesive, using one of the two methods below. Ensure material is facing the same direction that it is unrolled in and allow material to acclimate in place overnight.

TRIM &SCRIBE METHOD (WELDED SEAMS)
Prior to installation and heat-welding, each roll must be trimmed by ¾”. Use a straight edge or salvage edge trimmer to remove “ of material to create a clean edge. Use a hinge scriber to scribe and cut the top sheet in order to create a ¼” (.012” - .014”) gap between sheets. This gap will create a path for the heat-welding tool wheel to follow. As such, do not exceed prescribed gap in order to maintain seam integrity and strength.

DOUBLE CUT METHOD (BUTTED SEAMS)
Prior to preparing seams intended to be tight, ensure rolls are overlapped by ¼” on each roll. Set a straight edge (such as scrap material) along top sheet, making sure it is sitting flat and flush, not at an angle. Cut through both sheets of material, ensuring that knife blade is straight and vertical. Prevent stretching or moving material, as multiple cuts may be required to cut through both sheets. Once cut, remove scrap and check seam. Seam should be tight, but not overcompressed.

6. FLOORING 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 that proper trowel type and size is used, as manufacturer is not responsible for any and all adhesion issues related to improper adhesive selection or usage.

Once all seams have been cut, carefully fold back half of material and apply adhesive according to instructions for specific product in use. Use below chart for reference.

<table>
<thead>
<tr>
<th>Adhesive Coverage Rates (Per Gallon)</th>
<th>Adhesive</th>
<th>Porous</th>
<th>Non-Porous</th>
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<tbody>
<tr>
<td>SP-500</td>
<td>100 sq. ft / unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AW-510</td>
<td>160 sq. ft</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>AP-520</td>
<td>320 sq. ft</td>
<td>400 sq. ft</td>
<td></td>
</tr>
<tr>
<td>MS-700</td>
<td>160 sq. ft</td>
<td>235 sq. ft</td>
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<table>
<thead>
<tr>
<th></th>
<th>Brushed &amp; Rough Porous</th>
<th>Smooth Porous &amp; Non-Porous</th>
</tr>
</thead>
<tbody>
<tr>
<td>EW-710</td>
<td>135 sq. ft</td>
<td>150 sq. ft</td>
</tr>
</tbody>
</table>

When necessary, use weights (such as unused adhesive pails) to hold material back while adhesive flashes. Replace trowels and applicators at recommended intervals to maintain proper trowel ridge and spread rate.

Once adhesive has been applied and flashed, carefully roll material back into adhesive to avoid trapping air between the adhesive bed and the material. If heat-welding, ensure that adhesive does not ooze into seams. Pay close attention to flash times and working times in order to avoid installing into adhesive that is too wet or dry.

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. To prevent movement, dust, dirt, debris and topical moisture in or around seams, tape seams together or at recommended distance after installation using a multi-purpose masking tape intended for flooring and hard surfaces. Material that has been cut towards the inside end of the roll may be prone to edge-lifting and curling on end seams and butted seams - if this is evident after installation, use weight to weigh down edges.

Roll installation area with a 3 section, 100 lb. roller within 15 minutes of installation, crossing in a perpendicular direction after initial roll. Re-roll material 30 minutes after initial roll.

If adhesive is oozing out of seams or material is shifting excessively, adhesive may be too wet for installation. Review open times and allow adhesive to flash longer prior to installing material into adhesive.

Clean excessive adhesive or adhesive residue from the surface of the material according to adhesive instructions.

7. FLAT COVE INSTALLATION

Prior to creating and installing a flat cove, measure desired flat cove height and install appropriate Roppe Cove Cap at desired height. Using the Excelsior C-630 Contact Adhesive or 1" Excelsior TP-620 Pressure Sensitive Tape, install the appropriate Roppe Cove Stick Fillet directly to wall-floor joint to provide the desired radius for the flat cove.

While bending material to desired radius, measure and cut flat cove to meet cove cap, ensuring there is full contact with the cove stick. If flat cove does not make full contact with cove stick, cove and/or material could become damaged over time. Pattern scribe and cut all difficult fill pieces prior to spreading adhesive. Use the Boot / Mitered Outside Corner method for creating outside corners.

Using the Excelsior C-630 Contact Adhesive or 4" - 9.5" Excelsior TP-620 Pressure Sensitive Tape, install the material directly to the cove stick and the wall and roll using a hand roller.

8. HEAT-WELD INSTRUCTION

Ensure that adhesive has cured for recommended period of time prior to beginning heat-welding. Use below chart for reference.

Prior to cutting heat-welding groove, ensure gap between seams is free of adhesive, dust, dirt, debris and contaminates. When using electric grooving machine blade to cut groove depth at 66% of the total thickness of the tile (~1/8" deep for 2.5mm material). When using a hand grooving or electric grooving machine, test groove depth on scrap material to ensure proper depth is achieved. While grooving, ensure removal is split between each side of the roll, 50% per side. Hand-grooving may be required near walls, protrusion and other obstacles. Remove any and all loose pieces of flooring as well as any other debris from groove prior to welding. Using a hot air welding gun, insert the Roppe Rubber Welding Rod through the 4mm welding tip and into the center of the routed groove or seam. Prior to welding, test weld on scrap material to ensure temperature settings and welding speeds are correct and achieve a successful bond.

Do not allow foot traffic or trim welding bead until welding bead has completely cooled. To trim seam, use a clean, sharp quarter-moon spatula knife and a clean trim plate or a Crain Mozart trimmer. After one hour, trim seam again with a quarter-moon spatula knife to create a smooth, level seam surface. If seam imperfections are observed, use a hot air gun to smooth out imperfections.

9. 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, dust mop and/or vacuum flooring to remove any dirt, dust or debris.

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

If using a low-speed floor buffer (180 - 360 RPM), buff floor while wet using a 22 gauge soft bristled scrubbing brush or a 3M 4100 White Super Polish Pad. If flooring is heavily soiled, a 3M 5100 Red Cleaning Pad may be required.

If using an auto-scrubber, buff floor
while wet using a 22 gauge soft bristled scrubbing brush or a 3M 5100 Red Cleaning Pad. If flooring is heavily soiled, allow cleaner to remain on surface for an additional 5-10 minutes before scrubbing and removing.

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.

Do not use detergents, abrasive cleaners or "mop and shine" type products, as 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.

Installation areas that will be difficult to maintain with a buffer or auto-scrubber, such as elevators cabs or small rooms, as well as areas that will not receive routine maintenance with a buffer or auto-scrubber must have a compatible floor finish installed, such as the Excelsior MF-940 or GF-950, in order to ease maintenance of the floor covering.

For further information regarding finish application, daily or routine maintenance, please consult the product 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 at right). 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.

Installation areas that will be difficult to maintain with a buffer or auto-scrubber, such as elevators cabs or small rooms, as well as areas that will not receive routine maintenance with a buffer or auto-scrubber must have a compatible floor finish installed, such as the Excelsior MF-940 or GF-950, in order to ease maintenance of the floor covering. Place walk-off mats at outside entrances. Ensure mats are manufactured with non-staining backs to prevent discoloration.

11. WARRANTY

Roppe provides a 20 Year Limited Warranty for Envire rubber flooring products. For additional information, see associated warranty documents.