

Regupol® Revolution – Recycled Rubber

PART 1 – GENERAL**1.01 SUMMARY**

- A.** Section Includes: Resilient Flooring, including recycled rubber flooring.
- 1.** Types: Types of recycled rubber resilient flooring include:
 - a.** Recycled rubber resilient roll/sheet flooring.
 - 2.** Adhesives

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per guide specifications and specifier's practice.

- B.** Related Sections: Section(s) related to this section include:
- 1.** Concrete Substrate:
Division 3 Concrete Section(s).
 - 2.** Plywood Substrate: Division 6.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard but is merely a listing of references used. Article below should list only those industry standards used in this section. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.

1.02 REFERENCES

- A.** Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- B.** American Society for Testing and Materials (ASTM):
- 1.** ASTM D3676 Standard Specification for Rubber Cellular Cushion Used for Carpet or Rug Underlay
 - 2.** ASTM D2240 Standard Test Method for Rubber Property-Durometer Hardness
 - 3.** ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine
 - 4.** ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
 - 5.** ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers – Tension.
 - 6.** ASTM F137 Test Method for Flexibility of Resilient Flooring Materials.
 - 7.** ASTM F710 Practice for Preparing Concrete Floors and Other Monolithic Floors to Receive Resilient Flooring.
 - 8.** ASTM F925 Test Method for Resistance to Chemicals of Resilient Flooring
 - 9.** ASTM D5116 Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products



1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide recycled rubber resilient flooring, which has been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's guide specifications product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures.
- D. Samples: Submit selection and verification samples for finishes, colors and textures.
- E. Quality Assurance Submittals: Submit the following:
 1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
 2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 3. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

- 4. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- F. Closeout Submittals: Submit the following:
 1. Operation and Maintenance Data: Operation and maintenance data for Installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operational Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
 2. Warranty: Warranty documents specified herein.

1.05 QUALITY ASSURANCE

- A. Qualifications:
 1. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

Specifier Note: Retain paragraph below to suit project requirements; otherwise, delete paragraph below.

- a. Certificate: When requested, submit certificate indicating qualification.
 2. Manufacturer's Qualifications: Manufacturer capable of providing field service representation during construction and approving application method.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.

- B. Regulatory Requirements: [Specify applicable requirements of regulatory agencies].
- C. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer-approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern, and workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.

Specifier Note: Edit paragraph below to specify mock-up size.

- 1. Mock-Up Size: [Specify mock-up size].
 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- D. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

- E. Pre-installation Testing: Conduct pre-installation testing as follows: [Specify substrate testing; consult with flooring manufacturer.].

1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials at temperature and humidity conditions recommended by manufacturer and protect from exposure to harmful weather conditions.

1.07 PROJECT CONDITIONS

- A. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during and after installation as recommended by manufacturer.
- B. Field Measurements: Verify actual measurements/ openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.

1.08 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.

1. Warranty Period: [Specify term.] years commencing in Date of Substantial Completion.

1.09 MAINTENANCE

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.

Specifier Note: Revise paragraph below specifying size and percentage as required for project.

1. Quantity: Furnish quantity of recycled rubber flooring units equal to [Specify %.] of amount installed.
2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

PART 2 – PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards, and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 Regupol® Revolution – Recycled Rubber Resilient Sheet Flooring

- A. Manufacturer: Regupol America LLC
1. Contact: 11 Keystone Drive, Lebanon, PA 17042; Telephone: (800) 537-8737, (717) 675-2198, Fax: (717) 675-2199; www.regupol.com
- B. Proprietary Product(s): Regupol® Revolution, manufactured by Regupol America LLC, for commercial flooring applications.
1. Regupol® Revolution Original 6 recycled rubber resilient [sheet] flooring
 2. Regupol® Revolution Great 8 recycled rubber resilient [sheet] flooring
 3. Regupol® Revolution Golden Age recycled rubber resilient [sheet] flooring
 4. Regupol® Progress recycled rubber resilient [sheet] flooring



5. Regupol® PU350
one-component polyurethane adhesive

Specifier Note: Below Regupol® Revolution products for commercial applications combine quality recycled SBR tire rubber and recycled EPDM flecks. Regupol® Revolution Commercial Flooring, available in 46 colors, is a single-ply non-laminated surface with high slip resistance, durability, cushioned resilience, stain resistance and consistent color (no wear layer).

C. Regupol® Revolution Original 6- Recycled Rubber Resilient Sheet:

1. Roll Dimension
[48" (1219 mm) x 5/32" (4 mm) standard,]
 - a. Roll Weight:
[Specify 1.25 lb/ft2 (6.1 kg/m2); or 1.95 lb/ft2 (9.6 kg/m2)].
 - b. Roll Length:
[25 LF or 50 LF - Specify roll length].
 - c. Standard Tolerances
 1. Roll Width +1/2" -0"
 2. Roll Length +1% -0"
 3. Thickness +.3 mm -.3 mm
2. Colors: [Specify color from manufacturer's standard color selection Original 6 Collection].
3. Product Testing:
 - a. Density, (ASTM D3676), 60 pcf.
 - b. Hardness, (ASTM D2240 Shore A), 60 +/- 5
 - c. Coefficient of Friction, (ASTM D2047) >0.96
 - d. Tear Strength, (ASTM D624), 70 pli min.
 - e. Elongation, (ASTM D412), >145%
 - f. Tensile Strength, (ASTM D412), >200 PSI
 - g. Flexibility, 1/4-inch mandrel (ASTM F137): Pass
 - h. Chemical Resistance (ASTM F925):
 1. 5% Acetic Acid: No Change
 2. 70% Isopropyl Alcohol: No Change
 3. 5% Sodium Hydroxide: No Change
 4. 5% Hydrochloric Acid: No Change

5. 5% Ammonia: No Change
6. Bleach: No Change
7. 5% Phenol: No Change
8. Sulfuric Acid: No Change
- i. Indoor Air Quality (CA 1350) Pass

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division I Project Requirements (Product Substitutions Procedures) Section.

D. Regupol® Revolution Great 8 Series Recycled Rubber Resilient Sheet:

1. Roll Dimension
[48" (1219 mm) x 5/32" (4 mm) standard].
 - a. Roll Weight: [Specify 1.95 lb/ft2 (9.6 kg/m2)].
 - b. Roll Length:
[25 LF or 50 LF - Specify roll length].
 - c. Standard Tolerances
 1. Roll Width +1/2" -0"
 2. Roll Length +1% -0"
 3. Thickness +.3 mm -.3 mm
2. Colors: [Specify color from manufacturer's standard color selection Great 8 Collection].
3. Product Testing:
 - a. Density, (ASTM D3676), 60 pcf.
 - b. Hardness, (ASTM D2240 Shore A), 60 +/- 5
 - c. Coefficient of Friction, (ASTM D2047) >0.96
 - d. Tear Strength, (ASTM D624), 70 pli min.
 - e. Elongation, (ASTM D412), >145%
 - f. Tensile Strength, (ASTM D412), >200 PSI
 - g. Flexibility, 1/4-inch mandrel (ASTM F137): pass.
 - h. Chemical Resistance (ASTM F925):
 1. 5% Acetic Acid: No Change
 2. 70% Isopropyl Alcohol: No Change
 3. 5% Sodium Hydroxide: No Change

- 4. 5% Hydrochloric Acid: No Change
- 5. 5% Ammonia: No Change
- 6. Bleach: No Change
- 7. 5% Phenol: No Change
- 8. Sulfuric Acid: No Change

i. Indoor Air Quality (CA 1350) Pass

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division I Project Requirements (Product Substitutions Procedures) Section.

E. Regupol® Revolution Golden Age Recycled Rubber Resilient Sheet:

- 1. Roll Dimension:
[48" (1219 mm) x 5/32" (4 mm) standard].
 - a. Roll Weight:
[Specify 1.95 lb/ft² (9.6 kg/m²)].
 - b. Roll Length:
[25 LF or 50 LF - Specify roll length].
 - c. Standard Tolerances
 - 1. Roll Width +1/2" -0"
 - 2. Roll Length +1% -0"
 - 3. Thickness +.3 mm -.3 mm
- 2. Colors: [Specify color from manufacturer's standard color selection Golden Age collection].
- 3. Product Testing:
 - a. Density, (ASTM D3676), 60 pcf.
 - b. Hardness, (ASTM D2240 Shore A), 60 +/- 5
 - c. Coefficient of Friction, (ASTM D2047) >0.96
 - d. Tear Strength, (ASTM D624), 80 pli min.
 - e. Elongation, (ASTM D412), >145%
 - f. Tensile Strength, (ASTM D412), >220 PSI
 - g. Flexibility, 1/4-inch mandrel (ASTM F137): pass.
 - h. Chemical Resistance (ASTM F925):

- 1. 5% Acetic Acid: No Change
- 2. 70% Isopropyl Alcohol: No Change
- 3. 5% Sodium Hydroxide: No Change
- 4. 5% Hydrochloric Acid: No Change
- 5. 5% Ammonia: No Change
- 6. Bleach: No Change
- 7. 5% Phenol: No Change
- 8. Sulfuric Acid: No Change

i. Indoor Air Quality (CA 1350) Pass

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division I Project Requirements (Product Substitutions Procedures) Section.

F. Regupol® Revolution Progress Recycled Rubber Resilient Sheet:

- 1. Roll Dimension:
[48" (1219 mm) x 5/32" (4 mm) standard].
 - a. Roll Weight:
[Specify 1.10 lb/ft² (5.38 kg/m²)].
 - b. Roll Length:
[25 LF or 50 LF - Specify roll length].
 - c. Standard Tolerances
 - 1. Roll Width +1/2" -0"
 - 2. Roll Length +1% -0"
 - 3. Thickness +.3 mm -.3 mm
- 2. Colors: [Specify color from manufacturer's standard color selection Golden Age collection].
- 3. Product Testing:
 - a. Density, (ASTM D3676), 83 pcf.
 - b. Hardness, (ASTM D2240 Shore A), 60 +/- 5
 - c. Coefficient of Friction, (ASTM D2047) >0.96
 - d. Tear Strength, (ASTM D624), 80 pli min.
 - e. Elongation, (ASTM D412), >145%



- f. Tensile Strength, (ASTM D412), >220 PSI
- g. Flexibility, 1/4-inch mandrel (ASTM F137): pass.
- h. Chemical Resistance (ASTM F925):
 - 1. 5% Acetic Acid: No Change
 - 2. 70% Isopropyl Alcohol: No Change
 - 3. 5% Sodium Hydroxide: No Change
 - 4. 5% Hydrochloric Acid: No Change
 - 5. 5% Ammonia: No Change
 - 6. Bleach: No Change
 - 7. 5% Phenol: No Change
 - 8. Sulfuric Acid: No Change
- i. Indoor Air Quality (CA 1350) Pass

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division I Project Requirements (Product Substitutions Procedures) Section.

- G. Regupol® PU350
one-component polyurethane adhesive
 - 1. Product Name: The one-part urethane adhesive under this specification shall be Regupol® America's –Regupol® PU350 one-component polyurethane adhesive.
 - 2. Material: Regupol® PU350 is a one-component polyurethane moisture cured, non-sag, permanently elastic adhesive that has excellent adhesion to elastomers, concrete and wood and is engineered for indoor and outdoor applications.
 - 3. Adhesive Type: one-component polyurethane
 - 4. Adhesive Cure System: moisture cured
 - 5. Density (uncured) 10.1 lb/gal (1.2 kg/l)
 - 6. Color: Tan
 - 7. VOC Content: <60 g/ltr (EPA Method 24)
 - 8. Freeze/Thaw: stable
 - 9. Application Temperature:
60° F - 90° F (15°C - 32° C)
 - 10: Tensile Strength: 150 psi

- 11: Elongation At Break: 170% cured
- 12. Calcium Chloride Test (ASTM F1869):
Maximum 5.0 lbs per 1,000 sq./ft 24Hrs.
- 13: Concrete RH Requirement (ASTM F2170):
Maximum RH 85%
- 14. Shelf Life: 12 months
- 15. Skinning/Laying Time: 45-60 minutes
- 16. Trowel: 1/16" square notched trowel
- 17. Coverage Rate: 90 ft2 per gallon
(1/16" square notched trowel)

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.03 RELATED MATERIALS

- A. Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials.

2.04 SOURCE QUALITY

- A. Source Quality: Obtain recycled rubber resilient flooring materials from a single manufacturer.

PART 3 – EXECUTION

Specifier Note: Revise article below to suit project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.03 PREPARATION

- A. Surface Preparation: [Specify applicable product preparation requirements.].

Specifier Note: Coordinate article below with manufacturer's recommended installation details and requirements.

3.04 INSTALLATION/APPLICATION/CONSTRUCTION

- A. Recycled Rubber Flooring Installation: Comply with Regupol® Revolution Technical Manual for installation procedures and techniques.
- B. Finish Color/Textures/Patterns: [Specify installation finishes coordinated with finishes specified in Part 2 Products.].
- C. Related Products Installation: Refer to other sections listed in Related Sections paragraph herein for related products installation.

3.05 FIELD QUALITY REQUIREMENTS

Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer, and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service not required.

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
- 1. Site Visits: [Specify number and duration of periodic site visits.].

3.06 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.07 PROTECTION

- A. Protection: Protect installed product and finished surfaces from damage during construction.

Specifier Note: Retain article below to suit project requirements. Article may be used to describe specific criteria requirements of similar products or equipment.

3.08 SCHEDULES

Specifier Note: Retain paragraph below to suit project requirements. Reference a schedule or include a schedule as an attachment, which indicates where to locate products and equipment.

- A. Schedules: [Specify reference to applicable schedules.].

END OF SECTION