



## Section 09.66.23

# RESILIENT RUBBER ATHLETIC FLOORING

THIS DOCUMENT IS INTENDED AS A SUGGESTED GUIDE FOR CREATING, MODIFYING, OR EDITING YOUR CSI FORMATTED 3-PART ARCHITECTURAL GUIDE SPECIFICATIONS.

JOHNSONITE WILL NOT BE LIABLE FOR ANY DAMAGES ARISING OUT OF THE USE OF ANY INFORMATION OR SPECIFICATIONS FOUND IN THIS DOCUMENT.

ENSURE THAT YOU HAVE THE LATEST PUBLICATION FOR THIS SPECIFICATION.

THE SPECIFIER OR DESIGNER IS RESPONSIBLE FOR PRODUCT SELECTION AND ACCURACY OF ALL PROJECT SPECIFICATIONS, INCLUDING ANY JOHNSONITE INFORMATION OR SPECIFICATIONS USED.

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### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Resilient (rubber) Athletic Flooring.

#### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. LEED Submittals:
  - 1. Product Data for Credit EQ 4.1: For adhesives, include printed statement of VOC content and chemical components.
- C. Samples for Initial Selection: For each type of product indicated.
- D. Samples for Verification: For each type of product indicated, in manufacturer's standard-size samples of each resilient product color, texture, and pattern required.

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- E. Product Schedule: For resilient products. Use same designations indicated on Drawings.

1.4 QUALITY ASSURANCE

- A. Mockups: Provide resilient products with mockups specified in other Sections.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by Johnsonite, but not less than 55 deg F (13 deg C) or more than 85 deg F (29 deg C).

1.6 PROJECT CONDITIONS

- A. Install resilient products after other finishing operations, including painting, have been completed.
- B. Maintain ambient temperatures within range recommended by Johnsonite, but not less than 65 deg F (18 deg C) or more than 85 deg F (29 deg C) in spaces to receive resilient products during the following time periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- C. Maintain the ambient relative humidity between 40% and 60% during installation.
- D. Until Substantial Completion, maintain ambient temperatures within range recommended by Johnsonite, but not less than 55 deg F (13 deg C) or more than 85 deg F (29 deg C).

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### PART 2 - PRODUCTS

#### 2.1 RESILIENT ATHLETIC FLOORING

Manufacturer:

Johnsonite, Inc.

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Chagrin Falls, Ohio 44023

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Phone: (800) 899-8916

(440) 543-8916

Tech: Ext 9297

Samples: Ext 9299

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#### ENVIRONMENTAL SUSTAINABILITY NOTES:

##### Johnsonite Resilient Rubber Athletic Flooring

- Johnsonite offers a RESTART reclamation program for returning jobsite scrap
- Triumph Rubber Athletic Tile Flooring contains 53% pre-consumer recycled content
- Inertia Rubber Athletic Tile Flooring contains 34% pre-consumer recycled content
- Replay Rubber Athletic Sheet and Tile Flooring contains 92% post-consumer recycled content
- Resilient Replay and Triumph Rubber athletic Flooring contain 7% rapidly renewable content
- Inertia Rubber Athletic Tile Flooring contain 5% rapidly renewable content
- Replay is SCS FloorScore Certified and meets California Specifications Section 01350
- Loose lay designs like Underlock, SlideLock and Interlocking tiles may be used without adhesive- therefore, can be recycled and used again
- 100% Recyclable
- Phthalate, chlorine and halogen-free
- Johnsonite facilities are ISO 9001 and ISO 14001 Certified (Inertia and Triumph only)
- LEED contributions for Rubber Athletic Flooring includes MR2; MR4; MR5; and MR6
- For all environmental sustainability information visit ecoScorecard on Johnsonite home page at [www.tarkettna.com](http://www.tarkettna.com)

#### A. Resilient Rubber Athletic Sheet Flooring:

1. REPLAY Sheet Specify – Resilient Rubber Athletic Sheet Flooring with the following physical characteristics:
  - a. Manufactured from a composition of recycled truck tire crumb rubber encapsulated in a urethane binder.
  - b. Overall thickness:
    - 1) 1/4" (6.35 mm)
    - 2) 3/8" (9.5 mm)

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- c. Roll/Sheet Width: 4' (1.22 m)
  - d. ASTM D 2240 Standard Test Method for Rubber Property—Durometer Hardness: 65 Shore A.
  - e. ASTM D 2047, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring or 0.6 or greater.
  - f. ASTM F 970, Standard Test Method for Static Load Limit – passes 250 PSI.
  - g. ASTM D 3389 Standard Test Method for Coated Fabrics Abrasion Resistance: < 1.00 gram weight loss.
  - h. ASTM D 2859 Standard Test Method for Ignition Characteristics of Finished Floor Covering Materials (Pill Test): passes with greater than 1" of un-charred area.
  - i. Johnsonite offers a RESTART reclamation program for returning jobsite scrap
  - j. Replay Rubber Athletic Sheet Flooring contains 92% post-consumer recycled content
  - k. SCS FloorScore Certified and meets California Specifications Section 01350
  - l. Resilient Rubber athletic Flooring contains 7% rapidly renewable content
  - m. 100% Recyclable
  - n. Phthalate, chlorine and halogen-free
  - o. LEED contributions for Rubber Athletic Flooring includes MR2; MR4; MR5; and MR6
- For REPLAY Rolls specify (COMR \_\_\_\_ [Specify color by number and name] \_\_\_\_ [Specify gauge])

### B. Resilient Rubber Athletic Tile Flooring:

- 1. REPLAY Tile Specify – Resilient Rubber Athletic Tile Flooring with the following physical characteristics:
  - a. Manufactured from a composition of recycled truck tire crumb rubber encapsulated in a urethane binder.
  - b. Overall thickness: 3/8" (9.5 mm).
  - c. Tile texture and color:
    - 1) Hammered Textured Speckled Color
    - 2) Hammered Textured Solid Color
  - d. Tile style and size:
    - 1) Square Edge (glue down) 24" X 24" (61 cm X 61 cm)
    - 2) Interlocking (loose lay) 23" X 23" (58.42 cm X 58.42 cm)
  - e. ASTM D 2240 Standard Test Method for Rubber Property—Durometer Hardness: 65 Shore A.
  - f. ASTM D 2047, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring or 0.6 or greater.
  - g. ASTM F 970, Standard Test Method for Static Load Limit – passes 250 PSI.
  - h. ASTM D 3389 Standard Test Method for Coated Fabrics Abrasion Resistance: < 1.00 gram weight loss.
  - i. ASTM D 2859 Standard Test Method for Ignition Characteristics of Finished Floor Covering Materials (Pill Test): passes with greater than 1" of un-charred area.
  - j. Johnsonite offers a RESTART reclamation program for returning jobsite scrap
  - k. Replay Rubber Athletic Sheet Flooring contains 92% post-consumer recycled content
  - l. SCS FloorScore Certified and meets California Specifications Section 01350
  - m. Resilient Rubber athletic Flooring contains 7% rapidly renewable content

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- n. 100% Recyclable
  - o. Phthalate, chlorine and halogen-free
  - p. LEED contributions for Rubber Athletic Flooring includes MR2; MR4; MR5; and MR6
- For REPLAY SQUARE EDGE Tile specify (COMT \_\_\_\_ [Specify color by number and name] \_\_\_\_ [Specify gauge])
  - For REPLAY INTERLOCKING Tile specify (COMI \_\_\_\_ [Specify color by number and name] \_\_\_\_ [Specify gauge])
2. INERTIA Tile Specify – Resilient Rubber Athletic Tile Flooring with the following physical characteristics:
- a. Complies with requirements for ASTM F 1344 Standard Specification for Rubber Floor Tile Class 1-A and 1-B.
  - b. Tile manufactured of dual durometer layers composed of 100% synthetic and natural rubber.
  - c. Tile is two-ply vulcanized construction which incorporates a rubber wear layer and an elastic cushioned performance layer.
  - d. Wear layer thickness: .090" (2.3 mm).
  - e. Overall thickness:
    - 1) 1/4" [.250" (6.4 mm)].
    - 2) 3/8" [.375" (9.53 mm)].
  - f. Tile design, texture, and color:
    - 1) Square Edge (glue down) Hammered Texture Overall thickness: 1/4" [.250" (6.4 mm)].
      - a) Solid Color
      - b) Speckled Color
    - 2) UnderLock (loose lay) Hammered Texture Overall thickness: 1/4" [.250" (6.4 mm)].
      - a) Speckled Color
    - 3) UnderLock (loose lay) Hammered Texture Overall thickness 3/8" [.0375 (9.53 mm)].
      - a) Speckled Color
    - 4) SlideLock (loose lay) Hammered Texture Overall Thickness 3/8" [.0375 (9.53 mm)].
      - a) Speckled Color
    - 5) SlideLock (loose lay) Hammered Texture Overall Thickness 3/8" [.0375 (9.53 mm)].
      - a) Speckled Color
  - g. Tile size:
    - 1) Square Edge (glue down) 24" X 24" (61 cm X 61 cm).
    - 2) UnderLock (loose lay) 24" X 24" (61 cm X 61 cm).
    - 3) SlideLock (loose lay) 24" X 24" (61 cm X 61 cm).
  - h. ASTM D 2047, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring: 0.6 or greater.
  - i. ASTM F 970, Standard Test Method for Static Load Limit – passes 250 PSI.
  - j. ASTM D 3389 Standard Test Method for Coated Fabrics Abrasion Resistance: < 1.00 gram weight loss.

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- k. ASTM E 648, Standard Test method for Critical Radiant Flux of 0.45 watts/cm<sup>2</sup> or greater, Class I.
  - l. Johnsonite offers a RESTART reclamation program for returning jobsite scrap
  - m. Resilient Rubber athletic Flooring contains 7% rapidly renewable content
  - n. 100% Recyclable
  - o. Phthalate, chlorine and halogen free
  - p. LEED contributions for Rubber Athletic Flooring includes MR2; MR4; MR5; and MR6
  - q. Rubber Athletic Tile Flooring contains 53% pre-consumer recycle content
  - r. Loose lay designs like Underlock, Slidelock and interlocking tiles may be used without adhesive- therefore, can be recycled and used again.
  - s. Johnsonite facilities are ISO 9001 and ISO 14001 Certified
- For INERTIA HAMMERED TEXTURE, GLUE-DOWN Installation Tile specify (INRH\_\_\_\_ [Specify color by number and name] \_\_\_\_ )
  - For INERTIA UNDERLOCK LOOSE LAY specify (INRHU \_\_\_\_ [Specify color by number and name] \_\_\_\_ )
  - For INERTIA SLIDELOCK LOOSE LAY specify (INRHSL \_\_\_\_ [Specify color by number and name] \_\_\_\_ )
  - For INERTIA FAST LANE UNDERLOCK LOOSE LAY specify (INRCFLU \_\_\_\_ [Specify color by number and name] \_\_\_\_ )
3. TRIUMPH Tile Specify – Resilient Rubber Athletic Tile Flooring with the following physical characteristics:
- a. Complies with requirements for ASTM F 1344 Standard Specification for Rubber Floor Tile Class 1-A and 1-B.
  - b. Tile manufactured of dual durometer layers composed of 100% synthetic and natural rubber.
  - c. Tile is two-ply vulcanized construction which incorporates a rubber wear layer and an elastic cushioned performance layer.
  - d. Spike and Skate resistant.
  - e. Wear layer thickness: .090" (2.3 mm).
  - f. Overall thickness: 3/8" [.375" (9.5 mm)].
  - g. Tile design, texture, and color:
    - 1) Square Edge (glue down) Hammered Texture:
      - a) Solid Color.
      - b) Speckled Color.
    - 2) UnderLock (loose lay) Hammered Texture:
      - a) Solid Color.
      - b) Speckled Color.
    - 3) Interlocking (loose lay) Hammered Texture:
      - a) Speckled Color.
  - h. Tile size:
    - 1) Square Edge (glue down) 24" X 24" (61 cm X 61 cm)
    - 2) UnderLock (loose lay) 24" X 24" (61 cm X 61 cm)
    - 3) Interlocking (loose lay) 23.5" X 23.5" (59.7 cm X 59.7 cm).
    - 4) SlideLock (loose lay) 24" X 24" (61 cm X 61cm)
  - i. ASTM D 2047, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring of 0.6 or greater.

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- j. ASTM F 970, Standard Test Method for Static Load Limit – passes 250 PSI.
  - k. ASTM D 3389 Standard Test Method for Coated Fabrics Abrasion Resistance: < 1.00 gram weight loss.
  - l. ASTM E 648, Standard Test method for Critical Radiant Flux of 0.45 watts/cm<sup>2</sup> or greater, Class I.
  - m. Johnsonite offers a RESTART reclamation program for returning jobsite scrap
  - n. Resilient Rubber athletic Flooring contains 7% rapidly renewable content
  - o. 100% Recyclable
  - p. Phthalate, chlorine and halogen-free
  - q. LEED contributions for Rubber Athletic Flooring includes MR2; MR4; MR5; and MR6
  - r. Rubber Athletic Tile Flooring contains 53% pre-consumer recycled content
  - s. Loose lay designs like Underlock and Interlocking tiles may be used without adhesive- therefore, can be recycled and used again.
  - t. Johnsonite facilities are ISO 9001 and ISO 14001 Certified
- For TRIUMPH HAMMERED TEXTURE, GLUE-DOWN Installation Tile specify (SMH \_\_\_\_ [Specify color by number and name] \_\_\_\_ )
  - For TRIUMPH UNDERLOCK LOOSE LAY specify (SMHU \_\_\_\_ [Specify color by number and name] \_\_\_\_)
  - For TRIUMPH INTERLOCKING LOOSE LAY specify (SMHI \_\_\_\_ [Specify color by number and name] \_\_\_\_)
  - For TRIUMPH SLIDELock LOOSE LAY specify (SMHSL \_\_\_\_ [Specify color by number and name] \_\_\_\_)

## 2.2 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation.
- B. Adhesives: As recommended by Johnsonite to meet site conditions.
  - 1. Resilient Rubber Athletic Flooring (For glue down tile only).
    - a. Johnsonite 965 Flooring and Tread Adhesive
    - b. Johnsonite 975 Two-Part Urethane Adhesive
    - c. Johnsonite 140 SpraySmart Adhesive

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

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### 3.2 PREPARATION

- A. Prepare substrates according to Johnsonite written instructions to ensure adhesion [or acceptance] of Resilient Athletic Flooring.
1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  2. Remove substrate paint, coatings and other substances that are incompatible with adhesives or contain soap, wax, oil, solvents, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
  3. Mechanically remove contamination on the substrate that may cause damage to the resilient athletic flooring material. Permanent and non-permanent markers, pens, crayons, paint, etc., must not be used to write on the back of the flooring material or used to mark the substrate as they could bleed through and stain the flooring material.
  4. Prepare Substrates according to ASTM F 710 including the following:
    - a. For glue down tile:
      - 1) Moisture Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
      - 2) Perform anhydrous calcium chloride test, ASTM F 1869. Results must not exceed 5 lbs. Moisture Vapor Emission Rate per 1,000 sq. ft. in 24 hours.

– or –

        - a) Perform relative humidity test using in situ probes, ASTM F 2170. Must not exceed 80%.
      - 3) A pH test for alkalinity must be conducted. Results should range between 7 and 9. If the test results are not within the acceptable range of 7 to 9, the installation must not proceed until the problem has been corrected.
      - 4) Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer.
    - b. For loose lay (UnderLock, Interlocking) Tile:
      - 1) The Moisture Vapor Emission Rate (MVER) of the concrete will have no measurable effect on the UnderLock or Interlocking Tile as they are not adhered to the concrete substrate.
      - 2) Moisture testing must be conducted to identify if the MVER of the concrete is within the approved limits of the patching compound manufacturers specifications. (Follow patching compound manufactures instructions for proper selection and use.)
  5. Wood subfloors must have a minimum 18" (45.7 cm) of cross-ventilated space beneath the bottom of the joist.
    - a. The floor must be rigid, free of movement.
    - b. Single wood and tongue and groove subfloors should be covered with ¼" (6.4 mm) or ½" (12.7 mm) APA approved underlayment plywood.
      - 1) Use ¼" (6.4 mm) thick underlayment panels for boards with a face width of 3" (76 mm) or less.
      - 2) Use ½" (12.7 mm) thick underlayment panels for boards with a face width wider than 3" (76 mm).
    - c. Do not install over OSB (Oriented Strand Board), particle board, chipboard, lauan or composite type underlayments.
- B. Fill cracks, holes, depressions and irregularities in the substrate with good quality Portland cement based underlayment leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.



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- C. Floor covering shall not be installed over expansion joints.
- D. Do not install resilient products until they are same temperature as the space where they are to be installed.
  - 1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- E. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

**3.3 RESILIENT ATHLETIC FLOORING INSTALLATION**

- A. Comply with manufacturer's written instructions for installing resilient athletic flooring.
- B. Resilient Athletic Rubber Sheet Flooring:
  - 1. Install with Johnsonite adhesive specified for the site conditions and follow adhesive label for proper use.
  - 2. Install rolls in sequential order following roll numbers on the labels.
  - 3. Reverse sheets unless instructed otherwise in Johnsonite Installation Instructions.
  - 4. Roll the flooring in both directions using a 100 pound three-section roller.
- C. Resilient Athletic Rubber Tile Flooring:
  - 1. Install with Johnsonite adhesive specified for the site conditions and follow adhesive label for proper use.
  - 2. Do not Quarter Turn tile.
  - 3. Roll the flooring in both directions using a 100 pound three-section roller.
- D. Resilient Athletic Loose Lay UnderLock and Interlocking Tile Flooring:
  - 1. Do not adhere Loose Lay tile to substrate.
  - 2. Roll the flooring tabs with a hand roller.

**3.4 CLEANING AND PROTECTION**

- A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.
- B. Perform the following operations immediately after completing resilient product installation:
  - 1. Remove adhesive and other blemishes from exposed surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
  - 1. No traffic for 24 hours after installation.
  - 2. No heavy traffic, rolling loads, or furniture placement for 72 hours after installation.
- D. Wait 72 hours after installation before performing initial cleaning
- E. A regular maintenance program must be started after the initial cleaning.

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END OF SECTION 09.65.66.23