



DIVISION 9 - SECTION 09618 : SOUND CONTROL UNDERLAYMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes:

1. Sound control underlayment for laminate and engineered wood floors.

B. Related Sections:

1. Section 09640- Wood flooring.
2. Section 09800- Acoustical Insulation, Barriers/Reflectors: acoustical underlayment

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM E-1007 Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures.
2. ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems using The Robinson-Type Floor Tester.
3. ASTM E96 Standard Test Method for Water Vapor Transmission of Materials.
4. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs.
5. ASTM E-90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements. (STC values)
6. ASTM E-492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine. (IIC Values)

B. Leadership in Energy and Environmental Design – LEED®

1. International Organization for Standardization® document, ISO 14021 –This document provides guidance on the terminology, symbols, testing and verification methodologies that an organization should use for self-declaration of the environmental aspects of its products and services.

1.3 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

B. LEED: Provide documentation of how the requirements for credit will be met.

1. List of proposed materials with recycled content. Indicate pre-consumer and post consumer content.
2. Product data and certification letter indicating percentage of recycled content for both pre-consumer and post-consumer content.
3. List of proposed materials with rapidly renewing content. Indicate percentage content for each product.
4. Recycled content is defined in accordance with ISO 14021 Environmental labels and declarations, the International Organization for Standardization document:
 - a) Post-consumer material - waste materials diverted from the waste stream after consumer or commercial use.
 - b) Pre-consumer material - materials diverted from the waste stream during the manufacturing process. Excluded are regrind, rework, and scrap.

C. Product Data: Submit product data including manufacturer's specification product sheets for specified products to be used, preparation instructions and installation instructions.

D. Installation instructions: Manufacturer's recommended installation procedures.

E. Samples: Submit two samples, minimum size 8.5"x11" for each product specified.

F. Quality Assurance Submittals: Submit the following:

1. Test Reports: Certified test reports showing compliance with specified Performance characteristics.
2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance and physical characteristics.
3. Warranty: Manufacturers Warranty herein.

1.4 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.

a. Certificate: When requested, submit certificate indicating qualification.

2. Manufacturer's Qualifications: Manufacturer specialized in manufacturing products specified in this section with minimum fifteen years of experience and capable of approving installation method.

B. Mock-Ups: Install at jobsite a mock-up using acceptable products and installation methods approved by manufacturer.

1. Mock-Up Size: As determined by acoustical consultant.
2. Locate in area designated by architect.
3. Maintenance: Maintain mock-up intact during construction for quality Comparison, then remove and dispose of mock-up when project is completed.
4. Incorporation: Mock-up may be incorporated into final construction upon owner's approval.

1.5 DELIVERY, STORAGE, & HANDLING

- A. Delivery: Deliver materials in manufacturer's unopened, original and undamaged packaging with identification labels.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time Requirements to avoid construction delays.
- C. Storage and Protection: Store materials in a dry, warm, ventilated weather-tight location.

1.6 PROJECT CONDITIONS

Spaces must be enclosed and maintained dry with normal humidity and temperature levels between 65 and 75 degrees F (18-24 Celsius degrees) for a minimum of three days before, during and three days after installation of finished floor.

For wood floor installations over concrete slabs- In certain geographic regions the slabs may be subject to higher moisture levels where a calcium chloride test is recommended and or a relative humidity test. Vapor emission readings in excess of 5 lbs./ 1000 sq.ft. in less than 24 hours will require additional protection such as a concrete sealant, moisture abatement, or 6 mil. polyethylene sheet.

1.7 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

1. DURA underlayments are warranted to retain their essential firmness, resilience and porosity through the useful life of the floor covering under which they are installed. This warranty applies to all types of indoor installations.

In the event of a confirmed product failure due to defective manufacture, the company will replace, without charge, the defective portion of the underlayment with new equivalent product.

This warranty is valid only when the product is used in accordance with manufacturer's installation instructions and for its intended purpose and does not cover defects or failures due to inappropriate use or abuse.

"Useful life" is determined in accordance with "US-CRI Specifiers Handbook" or its Canadian equivalent.

1.8 MAINTENANCE

A. Extra Materials:

1. Quantity: Furnish quantity of recycled tire rubber acoustical underlayment as requested on purchase order.
2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage, and protection of extra materials.

PART 2 – MANUFACTURER / PRODUCTS

2.1 MANUFACTURERS:

- A. Acceptable Manufacturer: **DURA UNDERCUSHIONS LTD.**
Address: 8525 Delmeade Rd., Montreal, Quebec, Canada H4T 1M1
Telephone: (800) 295-4126, (514) 737-6561; Fax: (514) 342-7940;
Email: info@dura-undercushions.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIAL

- A. **DURA-SON®**: The sound rated floor material shall be an open cellular rubber mat reinforced with solid rubber particles bonded to fiberglass backing having a total thickness of 3.5mm (1/8") and weighing approximately 40 ozs/SY and a density of 22 lbs./cu.ft.. The product shall have an 85% minimum recycled tire rubber content. The product shall be : **DURA-SON®**.
 - 1. Thickness: 3.5mm (nominal 1/8")
 - 2. Roll size: 4.5' wide by 48' long
 - 3. Roll Area: (24SY / 216 sq.ft. per roll)
 - 4. Density: 22 lbs/cu.ft.
 - 5. Roll weight: 60 lbs
 - 6. Impact Insulation Class (ASTM E1007): Floor-ceiling assembly must meet requirement as stated by building code and /or acoustical consultant.
 - 7. CRI Green Label Certified I.D. No. CC-902245

2.3 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.4 SOURCE QUALITY

- A. Source Quality: Obtain open cellular recycled rubber acoustical underlayment from a single manufacturer.

PART 3.0 – EXECUTION

3.1 MANUFACTURER’S INSTRUCTIONS

- A. Compliance: Comply with manufacturer’s product technical folders with installation instructions.

3.2 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 floor covering manufacturer’s instructions.

For wood floor installations over concrete slabs- In certain geographic regions the slabs may be subject to higher moisture levels where a calcium chloride test is recommended and or a relative humidity test. Vapor emission readings in excess of 5 lbs./ 1000 sq.ft. in less than 24 hours will require additional protection such as a concrete sealant, moisture abatement, or 6 mil. polyethylene sheet.

3.3 PREPARATION

- A. Surface Preparation: Surfaces shall be prepared in accordance with ANSI standards.

3.4 INSTALLATION/APPLICATION

- A. Recycled Tire Rubber Sound Control Underlayment :
 - 1) Make sure the subfloor is clean and dry. When installing over bare concrete floor, first install a vapor barrier or consider using Dura-Son MB.
 - 2) Dura-Son may be installed parallel or perpendicular to flooring.
 - 3) Dura-Son seams must be placed tightly together and taped with duct tape.

When installing floating floors (lamine or engineered hardwood):

- a) Dura-Son is loose laid, not glued to sub-floor. Always install black side face down.

When installing glue down engineered hardwood floor:

- a) Glue Dura-Son to subfloor with a **Premium Multi Purpose Adhesive**.(black side face down)
- b) Glue Dura-Son to wood with a **Moisture Cured Urethane Base Adhesive**.

Always follow flooring manufacturers’ installation instructions and specifications.

DO NOT USE **DURA-SON** OR **DURA-SON MB** DIRECTLY UNDER PARQUET WOOD TILE FLOOR, SOLID HARDWOOD (NAIL DOWN) AND VINYL TILE OR VINYL SHEET.

FOR INSTALLATION UNDER NAIL DOWN HARDWOOD, PLEASE REQUEST FROM DURA APPROVED ASSEMBLY GUIDELINE.

B) Installation should not begin until all other trades are finished in the area.

Areas to receive the recycled tire rubber sound control underlayment must be enclosed and maintained dry with normal humidity and temperature levels between 65 and 75 degrees F (18-24 Celsius degrees) for a minimum of three days before, during and three days after installation of finished floor.

3.5 FIELD QUALITY REQUIREMENTS

A. The cost for all field acoustical testing , corrective work associated with the installation of the sound control underlayment and flooring to meet the minimum requirements, shall be absorbed by the flooring contractor(s).

3.6 CLEANING

A. 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.

3.7 PROTECTION

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

3.8 SCHEDULES

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

END OF SECTION