

SECTION 09 81 00
ACOUSTIC INSULATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing acoustic insulation.
- B. Related Sections:
 - 1. Thermal insulation is specified in Section 07 21 00.
 - 2. Roof board insulation is specified in Section 07 22 16.
 - 3. Firestopping insulation is specified in Section 07 84 00.
 - 4. Acoustical joint sealants are specified in Section 07 92 19.

1.02 SUBMITTALS

- A. Product Data: Manufacturer' s specifications for each type of insulation required.
- B. LEED Submittals:
 - 1. Credit MR 4: Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
 - a. Furnish the LEED Online Credit Template declaring that the credit requirements have been met and list the recycled content products used.
 - b. List total cost of all materials for the Project.
 - c. Required Audit Documentation:
 - 1) Manufacturer product data sheets, literature or letters highlighting the overall post-consumer and/or post-industrial recycled content percentages (by weight) of each product listed on the template.
 - 2) Materials invoices showing costs for each product listed on the template.
 - 2. MR Credit 5: Product data for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material.
 - a. Furnish the LEED Online Credit Template declaring that the credit requirements have been met.
 - b. Statement indicating cost and distance from manufacturer to Project for each regionally manufactured material.
 - c. Statement indicating cost and distance from point of extraction, harvest, or recovery to Project for each raw material used in regionally manufactured materials.
 - d. Calculations demonstrating that the Project incorporates the required percentage of regional materials/products and showing their cost, and the total cost of all materials for the Project.

e. Required Audit Documentation:

- 1) Manufacturer or vendor literature, product data sheets, letter stating address location of each material's final assembly site.
- 2) Map indicating distances from each location to the Project site.
- 3) Documentation of the cost/value of each material.

1.03 QUALITY ASSURANCE

- A. Fire Ratings: Comply with fire-resistance and flammability ratings specified.

1.04 ENVIRONMENTAL QUALITY ASSURANCE

- A. MR Credit 4: Provide building materials with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 10-percent of cost of materials used for the Project.

1. The cost of post-consumer content of an item shall be determined by dividing the weight of post-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.
2. The cost of post consumer recycled content plus one-half of pre-consumer recycled content of an item shall be determined by dividing the weight of post-consumer recycled content plus one-half of pre-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.

- B. MR Credit 5: Provide 10-percent of building materials (by cost) that are regional materials (extracted, harvested or recovered, and manufactured within 500 miles of the Project site). Distances can be computed at <http://www.indo.com/cgi-bin/dist?place1=&place2=>.

1. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.
 - a. Determine percentage of post-consumer and post-industrial content separately, using the guidelines contained in 16 CFR 260.7(e).
 - b. Previously used, reused, refurbished, and salvaged products are not considered recycled.
 - c. Determine percentage of recycled content of any item by dividing the weight of recycled content in the item by the total weight of all material in the item.
 - d. Determine value of recycled content of each item separately, by multiplying the content percentage by the value of the item.

- C. Applicable LEED Credits:

1. Credit MR 4 – Recycled Content.
2. Credit MR 5 – Regional Materials.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with Section 01 61 00.
- B. Protect insulation from physical damage and from becoming wet or soiled. Comply with manufacturer's recommendations for handling, storage and protection during installation.

1.06 INDOOR AIR QUALITY

- A. Protect ducts and HVAC system from loose insulation particulates.
- B. Provide temporary ventilation of building areas where building insulation is being installed.

PART 2 - PRODUCTS

2.01 ACOUSTIC INSULATION

- A. Formaldehyde-Free Unfaced Mineral/Glass Fiber Blanket/Batt Acoustical Insulation: Acoustical insulation produced by combining glass fibers with formaldehyde-free thermosetting resins to comply with ASTM C665, Type I.
 - 1. Surface Burning Characteristics: Maximum flame spread and smoke developed values of 25 and 50 when tested in accordance with ASTM E84.
 - 2. Approved Manufacturers: Johns Manville " Formaldehyde-Free Sound Control Fiber Glass Batts" or approved equal.
 - 3. Thickness: 3-inches.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's instructions for installation conditions.
- B. Do not install insulation until building is sufficiently enclosed or protected against absorption of moisture by the insulation, and do not install insulation unless supporting framing and construction is in a thoroughly dry condition.
- C. Install snugly between framing members with ends snugly fitted between units and against adjacent construction.
- D. Carefully cut and fit insulation around pipes, conduit, and other obstructions and penetrations.
- E. Where door and window frames occur in framing, cut additional strips of insulation and hand-pack as required to fill voids in and around such frames.

3.02 PROTECTION

- A. Protect installed insulation from harmful exposures and from physical damage.

3.03 WASTE MANAGEMENT

- A. General: Comply with Section 01 74 19.
- B. Plan and coordinate the insulation work to minimize the generation of offcuts and waste. Remove insulation scraps to the maximum extent feasible.
- C. Separate and recycle waste materials to the maximum extent possible.

END OF SECTION