

## Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The Project Resource Manual—CSI Manual of Practice, Fifth Edition*.

This section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.

Section numbers are from *MasterFormat 1995 Edition*, with section numbers from *MasterFormat 2004 Edition* in parentheses. Delete version not required.

### SECTION 07210 (07 21 00)

#### THERMAL INSULATION

Specifier Notes: This section covers Nu-Wool® Company, Inc. Nu-Wool® Premium Cellulose Insulation pneumatically blown dry into attics and floor assemblies and pneumatically sprayed damp into open wall cavities. Consult Nu-Wool Company, Inc. for assistance in editing this section for the specific application.

Nu-Wool Premium Cellulose Insulation may contribute points toward LEED™ certification. Consult Nu-Wool Company, Inc. for more information.

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

Specifier Notes: Edit the following paragraph for the specific application.

- A. Cellulose Insulation:
  - 1. Pneumatically blown dry into attics and floor assemblies.
  - 2. Pneumatically sprayed damp into open wall cavities.

##### 1.2 REFERENCE STANDARDS

Specifier Notes: List reference standards mentioned in this section, complete with designations and titles. Delete reference standards not included in this edited section. This article does not require compliance with reference standards, but is merely a listing of those used.

- A. ASTM C 739 – Standard Specification for Cellulosic Fiber Loose-Fill Thermal Insulation.
- B. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. ASTM E 119 – Standard Test Methods for Fire Tests of Building Construction and Materials.
- D. CPSC Standard 16 CFR Parts 1209 and 1404.
- E. UL 723 – Standard for Test for Surface Burning Characteristics of Building Materials.

### **1.3 SUBMITTALS**

Specifier Notes: Edit submittal requirements as required. Delete submittals not required.

- A. Comply with Section 01330 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including installation instructions.
- C. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- D. Warranty Documentation: Submit manufacturer's standard warranty.

### **1.4 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for past 10 years, in manufacture of cellulose insulation of similar type to that specified.
- B. Installer's Qualifications:
  - 1. Installer regularly engaged, for past 1 year, in installation of cellulose insulation of similar type to that specified.
  - 2. Employ persons trained for installation of cellulose insulation.
  - 3. Installer: Certified by cellulose insulation manufacturer.
  - 4. Installer's Equipment: Approved by cellulose insulation manufacturer.

### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage and Handling Requirements:
  - 1. Store and handle materials in accordance with manufacturer's instructions.
  - 2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
  - 3. Store materials in clean, dry area indoors.
  - 4. Protect materials during storage, handling, and installation to prevent damage.

## **PART 2 PRODUCTS**

## 2.1 MANUFACTURER

- A. Nu-Wool Company, Inc., 2472 Port Sheldon Street, Jenison, Michigan 49428. Toll Free (800) 748-0128. Phone (616) 669-0100. Fax (616) 669-2370. Website [www.nuwool.com](http://www.nuwool.com). E-mail [info@nuwool.com](mailto:info@nuwool.com).

## 2.2 THERMAL INSULATION

Specifier Notes: Nu-Wool Premium Cellulose Insulation is used for both methods of installation – pneumatically blown dry into attics and floor assemblies and pneumatically sprayed damp into open wall cavities.

- A. Cellulose Insulation:
  - 1. Pneumatically Blown Dry into Attics and Floor Assemblies: Nu-Wool Premium Cellulose Insulation.
  - 2. Pneumatically Sprayed Damp into Open Wall Cavities: Nu-Wool WALLSEAL Insulation.
- B. Material Description:
  - 1. Manufactured from recycled newspapers.
  - 2. Post-Consumer Recycled Content: 85 percent minimum.
  - 3. Fibers: Treated with boric acid and sodium polyborate additives to create permanent flame resistance.
  - 4. Fungicide Additive:
    - a. EPA registered.
    - b. Makes insulation resistant to mold growth.
  - 5. Additives:
    - a. Non-toxic.
    - b. Non-corrosive.
    - c. Does not irritate normal skin.
    - d. Does not give off odor during or after installation.
    - e. Does not attract vermin or insects.
    - f. Does not adversely affect other building materials.
- C. Compliance:
  - 1. UL classified R-8078.
  - 2. CPSC Standard 16 CFR Parts 1209 and 1404.
  - 3. ASTM C 739.
  - 4. ASTM E 119: Firewalls U382, U369a, U369b, U360.
  - 5. ES Report ESR-2217.
- D. Test Results:
  - 1. Settled Density:
    - a. Maximum density after long-term settling of dry installation: 1.6 lbs per cu ft.
  - 2. Thermal Resistance:
    - a. Average thermal resistance (R-value) per inch: 3.8.
  - 3. Flammability Characteristics:
    - a. Critical Radiant Flux: 0.12 W/cm<sup>2</sup> minimum.
    - b. Smoldering Combustion: No evidence of flaming and weight loss of 15.0 percent maximum.

4. Moisture Vapor Sorption:
  - a. Moisture Gain in Insulation: 15 percent maximum by weight.
5. Environmental Characteristics:
  - a. When in contact with steel, copper, aluminum, or galvanized materials: Non-corrosive.
  - b. Does not support fungal growth.
6. Surface Burning Characteristics, ASTM E 84 and UL 723: Nu-Wool Premium Cellulose Insulation.
  - a. Flame Spread Index: 15.
  - b. Smoke Developed Index: 5.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas to receive cellulose insulation.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

### **3.2 PREPARATION**

- A. Protection of In-Place Conditions:
  1. Protect adjacent surfaces, electrical boxes, open pipes, and register openings in accordance with manufacturer's instructions.
  2. Protect adjacent surfaces from contact with pneumatically blown dry or pneumatically sprayed damp cellulose insulation.
  3. Prevent cellulose insulation from plugging soffit vents in attics.
- B. Preparation: Ensure mechanical, plumbing, electrical, and other utility installations have been completed before installation of cellulose insulation.

### **3.3 INSTALLATION**

- A. Install cellulose insulation in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install cellulose insulation to uniform density without voids, gaps, or air pockets.
- C. Install cellulose insulation to density and depth to achieve required R-values.
- D. Pneumatically Blown Dry Cellulose Insulation:
  1. Pneumatically blow cellulose insulation dry into attics and floor assemblies after mechanical, plumbing, electrical, and other utility installations have been completed.
  2. Ensure heat-producing devices in attics have barriers constructed around them to prevent contact with cellulose insulation.
  3. Install cellulose insulation to a density of 1.6 lbs. per cu. ft.
- E. Pneumatically Sprayed Damp Cellulose Insulation:

1. Pneumatically spray cellulose insulation with controlled water fog for adhesion into open wall cavities after mechanical, plumbing, electrical, and other utility installations have been completed.
2. Install cellulose insulation to a density of 3.0 to 3.5 lbs. per cu. ft to prevent settling in wall cavities.
3. Use quantity of water in installation to ensure proper adhesion into wall cavities and proper density.

Specifier Notes: Insert the section number in the following sentence.

4. Install gypsum board to 2-by-4 walls as specified in Section \_\_\_\_\_ a minimum of 24 hours after installation of pneumatically sprayed damp cellulose insulation.

### **3.4 PROTECTION**

- A. Protect installed cellulose insulation from damage during construction.

**END OF SECTION**