**SECTION 07 21 13** – **BOARD INSULATION**

Alternatively, the text for each product may be cut & pasted into their general MasterFormat Sections if desired:

**SECTION 07 21 00** – **THERMAL INSULATION**

This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by the following method in Microsoft Word:

 Display the FILE tab on the ribbon, click OPTIONS, then DISPLAY. Select or deselect HIDDEN TEXT.

This specification has been prepared by Atlas Roofing Corporation for use in preparing a project specification covering EnergyShield® XR rigid board insulation in below-grade assemblies.

The following should be noted in using this specification:

Hypertext links to specific websites are included after manufacturer names and names of organizations whose standards are referenced within the text, to assist in product selection and further research. Hypertext links are contained in parenthesis and shown in blue, e.g.: [(www.astm.org](http://(www.astm.org))

Optional text requiring a selection by the user is enclosed within brackets and as red text, e.g.: “Color: [Red.] [Black.]"

For assistance on the use of the products in this section, contact Atlas Roofing Corporation by calling (800) 388-6134, or visit their website at [www.atlasrwi.com](http://www.atlasrwi.com).

1. **GENERAL**
	1. SUBMITTALS
		1. Action Submittals:
			1. Product Data.
			2. Samples.
		2. Informational Submittals:
			1. Certificate of Compliance.
2. **PRODUCTS**
	1. APPLICATIONS
		* 1. Insulation used in [above-grade exterior wall] [below-grade foundation wall] [perimeter foundation] [under slab] application.
	2. MANUFACTURERS
		1. Contract Documents/Basis of Design are based on polyisocyanurate (polyiso) rigid insulation by Atlas Roofing Corporation. [(www.atlasrwi.com](http://(www.atlasrwi.com))
		2. Equivalent products by following manufacturers with approval:
			1. Atlas Molded Products ThermalStar X-Grade expanded polystyrene (EPS) rigid insulation.
			2. Dupont Styrofoam extruded polystyrene (XPS) rigid insulation.
			3. Owens Corning Foamular 250 extruded polystyrene (XPS) rigid insulation.
		3. Substitutions: Refer to Division 01.
	3. MATERIALS
		1. Board Insulation:

Product: EnergyShield XR polyiso continuous insulation. ([wall.atlasrwi.com/energyshield-xr](https://wall.atlasrwi.com/energyshield-xr/))

Description: ASTM C1289, Type 1, Class 1 & 2; closed cell polyisocyanurate foam core with durable facers on both sides.

* + - 1. Meets performance requirements per ASTM C578, Physical Properties Table 1 complying with Type IV.
			2. Flame Spread / Smoke Developed rating of foam core: Class A, Maximum 25/450 per ASTM E84 / UL723.
			3. Free from CFCs, HCFCs, and HFCs.

SPEC NOTE: [C] may eliminate XPS as material option.

* + - 1. Solvent resistant: Yes
			2. Compressive strength: Minimum 25 PSI, tested to ASTM D1621.
			3. Moisture vapor transmission: Maximum 0.1 perm, tested to ASTM E96 desiccant method.
			4. Water absorption: Maximum 0.3 percent by volume, tested to ASTM C272.
			5. Service temperature: Minus 100 to plus 250 degrees F.

SPEC NOTE: [H] eliminates XPS as material option.

* + - 1. Global Warming Potential (GWP): Maximum 10.

SPEC NOTE: [I] eliminates XPS as material option.

* + - 1. Recycled content: Minimum 10 percent.
			2. Mold resistance: UL 2824, Highly resistant.

SPEC NOTE: [K] may eliminate certain products as substitutions.

* + - 1. Tested to UL 2818; GREENGARD Gold certified.

SPEC NOTE: [L] may eliminate certain products as substitutions.

* + - 1. Embodied Carbon: per EPD, less than 2.5 kg CO2 eq / m2 RSI.

SPEC NOTE: [M] may eliminate certain products as substitutions.

* + - 1. Thickness and insulation value: [0.75 inch, R-value 5.0.] [1.0 inch, R-value 6.5.] [1.2 inch, R-value 7.5] [1.5 inch, R-value 10.0.] [2.0 inch, R-value13.1.] [2.4 inches, R-value 15.0.] [3.0 inches, R-value 19.7.] [3.5 inch, R-value 22.2.] [4.0 inch, R-value 26.0.]

1. **EXECUTION**
	1. INSTALLATION
		1. Install insulation in accordance with manufacturer’s instructions.

END OF SECTION