

SPRAYED THERMAL / ACOUSTIC INSULATION

PART 1 - GENERAL

1.1 RELATED WORKS AND SECTIONS

- a) Section 07210 – Building Insulation
- b) Section 09820 – Acoustical Treatments

1.2 **WORK INCLUDED:** Provide all labor, materials and equipment necessary to provide a complete installed application of sprayed thermal insulation applied to areas indicated on the drawings and described herein.

1.3 **QUALIFICATIONS OF APPLICATORS:** All firms of applicators performing the Work of this Section must be approved by the manufacturers of the sprayed thermal material and shall also have been in business for a minimum period of three (3) years.

1.4 **SAMPLES:** If requested, provide samples, minimum 4" x 4" of sprayed insulation bonded to a piece of rigid board.

1.5 **MANUFACTURER'S LITERATURE:** Copies of the manufacturer's literature, clearly indicating conditions of acceptance and methods of applications shall be available on site before, and during, period of application of Work of this Section.

Manufacturer shall provide project references for work complete, still performing and in place, for a minimum of 10 years.

1.6 **DELIVERY:** Materials to be delivered to the site in original labeled and unopened packages.

1.7 **STORAGE:** Materials to be stored on site in a warm, dry place and either on a concrete floor or a wood platform. Monoglass Bonding Adhesive must be kept from freezing at all times.

1.8 ENVIRONMENTAL CONDITIONS

- a) Work on this Section shall only be performed under the conditions stated in the manufacturer's printed application instructions.
- b) Sufficient heat and ventilation must be provided at all times during installation and drying of spray insulation according to manufacturer's printed instructions.

1.9 **PATCHING:** All patching and repairing of sprayed thermal insulation due to cutting by other trades shall be performed under this Section and paid for by the trade performing the cutting.

1.10 PROTECTION

- a) Provide adequate protection to adjacent surfaces from being sprayed by means of drop cloths, polyethylene sheets, with necessary taping.
- b) Close off and seal any ductwork in areas where sprayed insulation is being applied.

1.11 **MANUFACTURER'S REPRESENTATIVE:** Allow the manufacturer's representative full access to the site.

PART 2 – PRODUCTS

2.1 MATERIALS

- a) Spray-applied materials shall be MONOGLASS Spray-On White Fiber conforming to CAN/ULC S102-10 and ASTM E-136 using MONOGLASS Liquid Bonding Adhesive manufactured by Monoglass Incorporated. Fibers shall consist of Type 902 Bio Soluble fiberglass.
- b) Thermal /acoustic insulation shall not contain asbestos, free crystalline silica or combustible fibers, and shall exhibit the following properties:

PROPERTY	TEST METHOD	RESULTS
Fire Hazard Classification	ASTM E84-07: CAN/ULC S102-10	Flame Spread = 0 Smoke Developed = 0
Non-Combustibility	ASTM E-136-11, ISO 1182-90,	Non-Combustible
Air Erosion	ASTM E859	No Mass Loss
Smolder Resistance	CGSB 51-GP-36P	Passed: 0.4% mean weight loss
Vibration Resistance Type 1	CGSB 51GP-11M	Passed: 0.02% mass loss
Dry Density	ASTM D-1622-83	3.0 pounds/cubic foot
Thermal Conductivity	ASTM C-518	K-Factor .25, R-Value 4.00/inch
Noise Reduction Coefficient	ASTM C-423	NRC = .85, 1.4" on solid backing
	ISO 354	NRC = .75 @ 25mm/1" ^{**} NRC = .95 @ 50mm/2" ^{**}
Fire Gas Toxicity	University of Pittsburgh Protocol	Max CO ₂ 3.5%, Max CO 0.3%
Fungus & Bacterial Resistance	ASTM G-21 MIL STD810F	No Growth

- c) MONOGLASS Bonding Adhesive shall be mixed with fresh, clean water to the exact proportions recommended by the manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

Examine all surfaces and conditions to which the work of this section is to be applied. Ensure they are adequate to provide a satisfactory application of the specified materials. Report any deficiencies to the design authority.

3.2 PREPARATION

- a) Remove any dust, dirt, foreign material, loose paint etc. on surfaces to which the work is to be applied, which could otherwise create a false bond or staining of insulation. Clean and seal as required.
- b) Verify bond requirements and compatibility of all surfaces to receive thermal insulation materials.
- c) Ensure that all ducts, piping, equipment, or other items, which would interfere with application of thermal insulation, are not positioned until thermal insulation work is completed.

3.3 APPLICATION

- a) Mix and apply thermal insulation in strict accordance with manufacturer's recommendations.
- b) Apply insulation to the substrate as specified in the site drawings.
- c) Apply insulation to substrate in sufficient thickness to achieve required thermal (acoustic) value.

3.4 CLEAN-UP

- a) Remove sprayed thermal insulation from material and surfaces not specifically required to be insulated.
- b) Broom clean work areas affected by the Work of this Section.

3.5 OPTIONS

- a) If required by design authority, board tamp sprayed insulation surface and apply Monoglass adhesive to seal the tamped insulation surface, in accordance with manufacturer's written instructions.
- b) Paint as required, or apply spray insulation using manufacturer's pre-tinted adhesives, as per manufacturer's instructions.

3.6 RETURN AIR PLENUMS

- a) For return air plenum applications, finish as in Options 3.5(a).

3.7 SURFACE PROTECTION

- a) If surface protection is required, spray-apply InsulSeal protective coating to desired thickness as indicated on coverage chart.

END OF SECTION