

Approved: 2007-12-31

Part 1 General

1.1 REFERENCES

- .1 Canada Green Building Council (CaGBC)
- .2 Canadian Urethane Foam Contractors' Association Inc. (CUFCA)
- .3 Green Seal Environmental Standards
 - .1 Standard GC-03-93, Anti-Corrosive Paints.
 - .2 Standard GS-11-97, Architectural Paints.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .5 South Coast Air Quality Management District (SCAQMD), California State
 - .1 SCAQMD Rule 1113-06, Architectural Coatings.
- .6 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S101-[04], Fire Endurance Tests of Building Construction and Materials.
 - .2 CAN/ULC-S102-[03], Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
 - .3 CAN/ULC-S705.1-01, Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density, Material Specification.
 - .4 CAN/ULC-S705.2-[05], Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density, Application.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two copies WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials.
- .3 Quality assurance submittals: submit following in accordance with Section 01 45 00 - Quality Control.
 - .1 Test reports: submit certified test reports for insulation from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.
 - .2 Submit test reports in accordance with CAN/ULC-S101 for fire endurance and CAN/ULC-S102 for surface burning characteristics.

- .3 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures.
- .4 Manufacturer's Field Reports: submit to manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in PART 3 - FIELD QUALITY CONTROL.

1.3 QUALITY ASSURANCE

- .1 Applicators to conform to CUFCA Quality Assurance Program.
- .2 Qualifications:
 - .1 Installer: person specializing in sprayed insulation installations approved by manufacturer with 5 documented experience.
 - .2 Manufacturer: company with minimum 5 years experience in producing of material used for work required for this project, with sufficient production capacity to produce and deliver required units without causing delay in work.
- .3 Mock-up:
 - .1 Construct mock-up in accordance with Section 01 45 00 - Quality Control.
 - .2 Construct mock-up 10 m.
 - .3 Mock-up may be part of finished work.
 - .4 Allow 24 hours for inspection of mock-up by Consultant before proceeding with sprayed insulation work.
- .4 Health and Safety Requirements: worker protection:
 - .1 Protect workers as recommended by CAN/ULC-S705.2 and manufacturer's recommendations:
 - .2 Workers must wear gloves, respirators, dust masks, long sleeved clothing, eye protection, protective clothing when applying foam insulation.
 - .3 Workers must not eat, drink or smoke while applying foam insulation.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Packing, shipping, handling and unloading:
 - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements].
 - .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Waste Management and Disposal:
 - .1 Separate waste materials for [reuse] [recycling] in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.5 SITE CONDITIONS

- .1 Ventilate area in accordance with Section 01 51 00 - Temporary Utilities.
- .2 Ventilate area to receive insulation by introducing fresh air and exhausting air continuously during and 24 hour after application to maintain non-toxic, unpolluted, safe working conditions.

- .3 Provide temporary enclosures to prevent spray and noxious vapours from contaminating air beyond application area.
- .4 Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting of insulation materials.
- .5 Apply insulation only when surfaces and ambient temperatures are within manufacturers' prescribed limits.

Part 2 Products

2.1 MATERIALS

- .1 Insulation: spray polyurethane to CAN/ULC-S705.1.
- .2 Primers: in accordance with manufacturer's recommendations for surface conditions.
 - .1 Maximum VOC limit 100g/l to SCAQMD Rule 1113.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 APPLICATION

- .1 Apply insulation to clean surfaces in accordance with CAN/ULC-S705.2 manufacturer's printed instructions.
- .2 Use primer where recommended by manufacturer.
- .3 Apply sprayed foam insulation in thickness as indicated.

3.3 FIELD QUALITY CONTROL

- .1 Manufacturer's Field Services:
 - .1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.4 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION