

PART 1 - GENERAL

- 1.1 REFERENCES
- .1 Canadian Urethane Foam Contractors Association Inc. (CUFCA)
 - .2 Green Seal (GS)
 - .1 GS-11-2013, Standard for Paints and Coatings.
 - .3 South Coast Air Quality Management District (SCAQMD)
 - .1 SCAQMD Rule 1113-13, Architectural Coatings.
 - .4 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S101-07, Standard Methods of Fire Tests of Building Construction and Materials.
 - .2 CAN/ULC-S102-10, Standard 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. Includes Amendment 1.2.
 - .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 Submit in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for polyurethane foam sprayed insulation and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit copies of WHMIS and MSDS in accordance with Section 01 35 29 - Health and Safety Requirements.
 - .3 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures.
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1.3 QUALITY
ASSURANCE

- .1 Applicators to conform to CUFCA Quality Assurance Program.
- .2 Qualifications:
 - .1 Installer: person specializing in sprayed insulation installations with documented experience approved by manufacturer.
 - .2 Manufacturer: company with 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 m² minimum, of sprayed insulation including one inside corner and one outside corner.
 - .3 Mock-up may be part of finished work.
 - .4 Allow 24 hours for inspection of mock-up by Departmental Representative 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 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
 - .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
 - .3 Storage and Handling Requirements:
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- 1.4 DELIVERY,
STORAGE AND
HANDLING
(Cont'd)
- .3 (Cont'd)
- .1 Store materials off ground, indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
- .2 Replace defective or damaged materials with new.
- 1.5 SITE CONDITIONS
- .1 Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting of insulation materials.
- .2 Apply insulation only when surfaces and ambient temperatures are within manufacturers' prescribed limits.

PART 2 - PRODUCTS

- 2.1 MATERIALS
- .1 Primers: in accordance with manufacturer's recommendations for surface conditions.
- .2 Insulation: spray polyurethane foam to CAN/ULC-S705.1, thickness and RSI Value as indicated on drawings.
- .3 Initial thermal resistance: minimum RSI 2.5 per 50 mm.
- .4 Density: medium density.
- .5 Air barrier properties: to ASTM E2178. @75Pa: maximum 0.05L/s.
- .6 Water Vapour Permeance to ASTM E96: 50 mm thick: maximum 60 ng/(Pa.s.m2).
- .7 Tensile Strength: minimum 200 kPa to ASTM D1621.
- .8 Flame Spread: to CAN/ULC-S102, in accordance with the latest edition of the National Building Code. Flame spread to be less than 500.
- .9 Water Absorption by volume: maximum 4% to ASTM D2842.
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| <u>2.1 MATERIALS</u>
(Cont'd) | .10 | Spray foam insulation to be compatible with DC315 by International Fireproof Technology Inc. |
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PART 3 - EXECUTION

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| <u>3.1 EXAMINATION</u> | .1 | Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for sprayed insulation application accordance with manufacturer's written instructions.
.1 Visually inspect substrate in presence of Departmental Representative.
.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative. |
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| <u>3.2 APPLICATION</u> | .1 | Apply insulation to clean surfaces in accordance with manufacturer's printed instructions. |
| | .2 | Use primer where recommended by manufacturer. |
| | .3 | Apply sprayed foam insulation in thickness as indicated on the drawings. |

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| <u>3.3 CLEANING</u> | .1 | Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
.1 Leave Work area clean at end of each day. |
| | .2 | Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
.1 Remove insulation material spilled during installation and leave work area ready for application of wall board. |