

## **PART 1**      **GENERAL**

### **1.1**      **RELATED SECTIONS**

- .1      Section 01 33 00 – Submittal Procedures.
- .2      Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
- .3      Section 07 27 10 – Air Barriers.
- .4      Section 08 11 00 – Metal Doors and Frames.

### **1.2**      **REFERENCES**

- .1      Canadian Urethane Foam Contractors' Association Inc. (CUFCA)
- .2      Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1      Material Safety Data Sheets (MSDS).
- .3      Underwriters' Laboratories of Canada (ULC)
  - .1      CAN/ULC-S101-07, Fire Endurance Tests of Building Construction and Materials.
  - .2      CAN/ULC-S102-10, 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.

### **1.3**      **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 01 35 29 – Health and Safety Requirements.

### **1.4**      **QUALITY ASSURANCE**

- .1      Applicators to conform to CUFCA Quality Assurance Program.
  - .2      Health and Safety Requirements: worker protection:
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- .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 and protective clothing when applying foam insulation.
- .3 Workers must not eat, drink or smoke while applying foam insulation.

## **1.5 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 and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

## **1.6 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 Low expanding, one-component, polyurethane foam sealant, curing to a semi-rigid, closed cell urethane foam providing an RSI of 0.9 per 25.4 mm. To meet the following physical properties:
    - .1 Density: 25.7 kg/m<sup>3</sup>
    - .2 Compressive Strength Parallel @ 10%: 69-96 psi
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|----|----------------------------|------------|
| .3 | Tensile Strength:          | 103 psi    |
| .4 | Water Vapour Transmission: | 5.97 perms |
| .5 | Flame Spread:              | 20         |
| .6 | Smoke Development:         | 70         |
- .2 Primers: in accordance with manufacturer's recommendations for surface conditions.

### **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 foam sealant to clean surfaces in accordance with manufacturer's printed instructions. Surfaces to be free of dust, dirt, oil and other foreign materials.
- .2 Cover surfaces not intended to be foamed.
- .3 Apply foam sealant to perimeter of openings indicated and to thickness as recommended by manufacturer. Trim excess cured foam from finished area.
- .4 Cover exposed urethane foam sealants to protect from adverse affects from ultraviolet light (sunlight).

#### **3.3**      **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.