

## **PART 1 - GENERAL**

### **1.1 REFERENCES**

- .1 ASTM International Inc.
  - .1 ASTM D 4101, Standard Specification for Polypropylene Injection and Extrusion Materials
  - .2 ASTM D 4101, Standard Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems
- .2 Canadian Standards Association (CSA International)
  - .1 CAN/CSA-Series B1800-06, Thermoplastic Nonpressure Pipe Compendium - B1800 Series.
- .3 Green Seal Environmental Standards (GSES)
  - .1 Standard GS-36-00, Commercial Adhesives.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).

### **1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Provide manufacturer's printed product literature and datasheets for piping and adhesives, and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Provide two copies WHMIS MSDS - Material Safety Data Sheets.

### **1.3 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver materials to site in original factory packaging, labeled with manufacturer's name, address.
- .3 Store at temperatures and conditions recommended by manufacturer.
- .4 Packaging Waste Management: remove for reuse and return by manufacturer of pallets, crates, padding and packaging materials in accordance with Section 01 74 00 - Cleaning and Waste Management.

## **PART 2 - PRODUCTS**

### **2.1 DRAIN WASTE & VENT PIPING**

- .1 Piping and Fittings: Schedule 40 polypropylene pipe and fittings manufactured from Type II, high-impact co-polymer plastic to ASTM D4101 temperature serviceability. Dimensional tolerances to CSA B181.3.
  - .1 Acceptable Product: Orion "Brownline" or approved equal in accordance with B6.

## **PART 3 - EXECUTION**

### **3.1 APPLICATION**

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

### **3.2 INSTALLATION**

- .1 In accordance with Section 23 05 05 - Installation of Pipework.
- .2 Install in accordance with National Plumbing Code and local authority having jurisdiction.

### **3.3 TESTING**

- .1 Hydraulically test to verify grades and freedom from obstructions.

### **3.4 PERFORMANCE VERIFICATION**

- .1 Cleanouts:
  - .1 Ensure accessible and that access doors are correctly located.
  - .2 Open, cover with linseed oil and re-seal.
  - .3 Verify cleanout rods can probe as far as the next cleanout, at least.
- .2 Test to ensure traps are fully and permanently primed.
- .3 Storm water drainage:
  - .1 Verify domes are secure.
  - .2 Ensure weirs are correctly sized and installed correctly.
  - .3 Verify provisions for movement of roof system.
- .4 Ensure fixtures are properly anchored, connected to system and effectively

vented.

- .5 Affix applicable label (storm, sanitary, vent, pump discharge) c/w directional arrows every floor or 4.5 m (whichever is less).

### **3.5 CLEANING**

- .1 Clean in accordance with Section 01 74 00 - Cleaning and Waste Management.
  - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
- .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 00 - Cleaning and Waste Management.