

PART 1 - GENERAL

1.1 REFERENCES

- .1 American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE).
 - .2 Department of Justice Canada (Jus).
 - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .2 Transportation of Dangerous Goods Act, 1992 (TDGA), c. 34.
 - .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).
 - .4 National Fire Protection Association (NFPA).
 - .1 NFPA 90A-02, Standard for the Installation of Air-Conditioning and Ventilating Systems.
 - .2 NFPA 90B-02, Standard for Installation of Warm Air Heating and Air-Conditioning Systems.
 - .5 Sheet Metal and Air-Conditioning Contractors' National Association (SMACNA).
 - .1 SMACNA HVAC Duct Construction Standards - Metal and Flexible, 95 (Addendum No.1, November 1997).
 - .2 SMACNA IAQ Guideline for Occupied Buildings under Construction, 1st Edition, 1995.
 - .6 Underwriters Laboratories Inc. (UL).
 - .1 UL 181-96, Standard for Factory-Made Air Ducts and Air Connectors.
 - .7 Underwriters Laboratories of Canada (ULC).
 - .1 CAN/ULC-S110-1986 (R2001), Fire Tests for Air Ducts.
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1.2 SUBMITTALS

- .1 Submit documents and samples required.
 - .1 Product Data.
 - .1 Product data should include the following:
 - .1 Thermal properties.
 - .2 Friction losses.
 - .3 Sound attenuation.
 - .4 Tightness.
 - .5 Fire resistance characteristics.
- .2 Samples: Submit samples of different types of flexible ducts offered, along with related technical data sheets.

1.3 QUALITY ASSURANCE

- .1 Certification of Ratings:
 - .1 Catalogue or published ratings to be those obtained from tests carried out by manufacturer or independent testing agency signifying adherence to Codes and Standards.

1.4 DELIVERY, STORAGE, AND HANDLING

- .1 Protect on site stored or installed absorptive material from moisture damage.

PART 2 - PRODUCTS

2.1 GENERAL

- .1 Factory fabricated to CAN/ULC-S110.
 - .2 Pressure drop coefficients listed below are based on relative sheet metal duct pressure drop coefficient of 1.00.
 - .3 Flame spread rating not to exceed 25. Smoke developed rating not to exceed 50.
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2.2 METALLIC - INSULATED

- .1 Spiral wound flexible aluminum with glass fibre thermal insulation with vapour barrier and vinyl reinforced jacket, as indicated.
- .2 Performance.
 - .1 Factory tested to 3 kPa without leakage.
 - .2 Maximum relative pressure drop coefficient: 3.
 - .3 Thermal loss/gain: 1.03 W/m²/°C.
 - .4 ULC approved Class 1.
 - .5 Acceptable products: Flex Master, T/L-A Model or equivalent.

PART 3 - EXECUTION

3.1 INSTALLATION OF FLEXIBLE DUCT

- .1 Install flexible air ducts where specified in compliance with SMACNA Recommendations, ANSI/NFPA 90A, 90B, and UL 181 Standards.

END OF SECTION
