

Part 1 General

1.1 SCOPE OF WORK

- .1 Provide and install all duct insulation and jacketing as shown on the drawings.

1.2 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM C335, Test Method for Steady State Heat Transfer Properties of Horizontal Pipe Insulation.
 - .2 ASTM C411, Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation.
- .2 Canadian General Standards Board (CGSB)
 - .1 CGSB 51-GP-52Ma, Vapour Barrier, Jacket and Facing Material for Pipe, Duct and Equipment Thermal Insulation.
- .3 Thermal Insulation Association of Canada (TIAC): National Insulation Standards.
- .4 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102, Surface Burning Characteristics of Building Materials and Assemblies.

1.3 DEFINITIONS

- .1 For purposes of this section:
 - .1 "CONCEALED" - insulated mechanical services and equipment in suspended ceilings and non-accessible chases and furred-in spaces.
 - .2 "EXPOSED" - will mean "not concealed" as defined herein.
 - .3 Insulation systems - insulation material, fasteners, jackets, and other accessories.
- .2 TIAC Codes:
 - .1 CRD: Code Round Ductwork,
 - .2 CRF: Code Rectangular Finish.

Part 2 Products

2.1 FIRE AND SMOKE RATING

- .1 In accordance with CAN/ULC-S102:
 - .1 Maximum flame spread rating: 25.
 - .2 Maximum smoke developed rating: 50.

2.2 INSULATION

- .1 Mineral fibre: as specified, includes glass fibre, rock wool, slag wool.

- .2 Thermal conductivity ("K" factor) not to exceed specified values at 24°C mean temperature when tested in accordance with ASTM C335.
- .3 TIAC Code C-1: Rigid mineral fibre board to ASTM C612, with factory applied vapour retarder jacket to CGSB 51-GP-52Ma.
 - .1 Application: on exterior of air intake/ventilation ducts and combustion air ducts (where shown on drawings) 1200 mm or more across the bottom.
- .4 TIAC Code C-2: Mineral fibre blanket to ASTM C553 faced with factory applied vapour retarder jacket to CGSB 51-GP-52Ma.
 - .1 Application: Round ducts and rectangular ducts less than 1200 mm across the bottom. Do not use in mechanical rooms.
 - .2 Mineral fibre: to ASTM C553.
 - .3 Jacket: to CGSB 51-GP-52Ma.
 - .4 Maximum "K" factor: to ASTM C553.
- .5 Insulation thickness: 50mm on combustion air and ventilation air ducts.

2.3 JACKETING

- .1 Provide canvas jacket on duct insulation in mechanical rooms including duct shaft room. Canvas jacketing not required for concealed ductwork.

Part 3 Execution

3.1 PRE-INSTALLATION REQUIREMENTS

- .1 Surfaces clean, dry and free from foreign material.

3.2 INSTALLATION

- .1 Install in accordance with TIAC National Standards.
- .2 Apply materials in accordance with manufacturers instructions and as indicated.
- .3 Maintain uninterrupted continuity and integrity of vapour retarder jacket and finishes.
 - .1 Hangers, supports to be outside vapour retarder jacket.
 - .2 Apply high compressive strength insulation where insulation may be compressed by weight of ductwork.
- .4 Fasteners: At 300 mm oc in horizontal and vertical directions, minimum two rows each side.

END OF SECTION