

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 21 05 05 - Common Work Results for Fire Suppression.

1.2 REFERENCES

- .1 Underwriter Laboratory of Canada (ULC).
 - .1 CAN/ULC-S503, Standard for Carbon Dioxide Fire Extinguishers.
 - .2 CAN/ULC-S504, Standard for Dry Chemical Fire Extinguishers.
 - .3 CAN/ULC-S508, Standard for the Rating and Fire Testing of Fire Extinguishers.
 - .4 CAN/ULC-S554, Standard for Water-Based Agent Fire Extinguishers.
- .2 National Fire Protection Association (NFPA).
 - .1 NFPA 10 - 2013, Standard for Portable Fire Extinguishers.
 - .2 NFPA 170 - 2012, Standard for Fire Safety and Emergency Symbols.
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).

1.3 SUBMITTALS

- .1 Submit manufacturer's printed product literature, specifications, and datasheet in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Technical Specifications:
 - .1 Submit technical specifications and documentation from manufacturer. Shop drawings must provide the following information: product characteristics, performance criterion, dimensions, constraints, and finish.
 - .2 Submit two copies of Materials Safety Data Sheets required as per WHMIS (Workplace Hazardous Materials Information System), and in accordance with Section 01 33 00.
- .3 Submit required shop drawings.

1.4 CLOSEOUT SUBMITTALS

- .1 Specs sheets and operation and maintenance literature, which will be appended to the manual mentioned in the Section 01 78 00 - Closeout Submittals.

1.5 QUALITY CONTROL

- .1 Health and Safety:
 - .1 Take necessary measures to ensure health and safety on construction site, in accordance with Section 01 35 29.06 - Health and Safety Requirements.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Sort waste in order to re-use and recycle in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Collect packaging materials and send to appropriate recycling facilities.
- .3 Collect and sort plastic, paper, and corrugated cardboard wrappings, and dispose them in appropriate designated bins in conformity with the Waste Management Plan.
- .4 Sort, flatten and place metal banding in designated area for recycling in conformity with the Waste Management Plan.
- .5 Manipulate and eliminate hazardous materials in accordance with the Canadian Environmental Protection Act, Transportation of Dangerous Goods Act, and provincial and municipal regulations.
- .6 Transport unused metal elements to a recycling facility approved by the Departmental Representative.

1.7 TRANSPORT, STORAGE, AND HANDLING

- .1 Conditioning, Transport, Handling, and Unloading:
 - .1 Transport, handle, and deliver materials and equipment as per manufacturers written instructions.
 - .2 Deliver materials and equipment in good condition to the construction site and in their closed original packaging which must bear the manufacturer's name, address, and ULC approval.
- .2 Storage and Protection:
 - .1 Store materials and equipment as per manufacturers' recommendations, in a clean, dry, and well ventilated place.
 - .2 Replace all defective materials and equipment with new materials and equipment.

1.8 ACCEPTABLE PRODUCTS AND MATERIALS

- .1 Where a particular brand name is stipulated, see Instructions to Bidders for procedure for requesting approval of substitute materials and products.

Part 2 Products

2.1 MULTIPURPOSE DRY CHEMICALS EXTINGUISHERS (EP-01)

- .1 Multipurpose dry chemicals portable fire extinguishers: permanent pressure type, refillable, equipped with flexible hose with closing valve and pressure gauge.

- .2 Characteristics:
 - .1 Approval: CAN/ULC-S504.
 - .2 Fire Classes: A, B, and C.
 - .3 Minimum ULC Class: 4-A: 80-B:C.
 - .4 Minimum capacity: 4.54 kg (10 lbs).
 - .5 Activation: permanent pressure.

- .3 Acceptable Products:
 - .1 Ansul, model Sentry 10 - AA10S.
 - .2 Amerex, model B456.
 - .3 Pyrochem, model PC10SABC+1.
 - .4 Replacement materials or products: approved by addendum according to Instructions to bidders.

2.2 CARBON DIOXYDE EXTINGUISHERS (EP-02)

- .1 Carbon dioxide extinguishers, with aluminum cylinder, equipped with insulated handle, hose and horn discharge assembly, self-closing lever or squeeze-grip operation, fully charged.

- .2 Characteristics:
 - .1 Approval: CAN/ULC-S503.
 - .2 Fire Classes: B and C.
 - .3 Minimum ULC Class: 20B-C.
 - .4 Minimum capacity: 9 kg.
 - .5 Activation: permanent pressure.

- .3 Acceptable Products:
 - .1 Strike First, model SF-20CO2.
 - .2 Ansul, model Sentry 20 - CD10A-1.
 - .3 Amerex, model 332.
 - .4 Replacement materials or products: approved by addendum according to Instructions to bidders.

2.3 WET CHEMICAL FIRE EXTINGUISHERS FOR KITCHEN (EP-03)

- .1 Wet chemical fire extinguishers for kitchen, rechargeable, stainless steel cylinder, equipped with flexible hose with closing valve and pressure gauge.
- .2 Characteristics:
 - .1 Approval: CAN/ULC-S554.
 - .2 Fire Classes: A and K.
 - .3 Minimum ULC Class: 1-A: K.
 - .4 Minimum capacity: 6 L.
 - .5 Activation: permanent pressure.
- .3 Acceptable Products:
 - .1 Ansul, model K-Guard - K01-2.
 - .2 Amerex, model B262.
 - .3 Pyrochem, KS 6000 Model.
 - .4 Replacement materials or products: approved by addendum according to Instructions to bidders.

2.4 EXTINGUISHER BRACKETS

- .1 Brackets as recommended by extinguishers manufacturer.

2.5 FIRE CABINETS

- .1 Recessed or semi-recessed, pre-fabricated 1.6 mm thick steel cabinets, equipped with a 2.5 mm steel door opening up to 180°.
- .2 Cabinets to have same equivalent fire rating as wall where cabinets are installed.
- .3 Door with piano hinges with following characteristics:
 - .1 Full metallic door with latching device.
- .4 Finish:
 - .1 Box: finished with primer.
 - .2 Door and frame: painted with color to the choice of the Architect.
- .5 Acceptable Products:
 - .1 Recessed cabinet:
 - .1 William Brothers Corp., model 1-2211;
 - .2 CFH, model CE-950-4.
 - .3 Guardian, model 1820.
 - .4 Replacement materials or products: approved by addendum according to Instructions to bidders.

- .2 Semi-recessed cabinet:
 - .1 William Brothers Corp., model 1-2311.
 - .2 Guardian, model 1830.
 - .3 Replacement materials or products: approved by addendum according to Instructions to bidders.

2.6 IDENTIFICATION

- .1 Identify extinguishers in accordance with recommendations of NFPA 10 and CAN/ULC-S508.
- .2 Attach bilingual tag or label to extinguishers, indicating month and year of installation. Provide space for service dates.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Conformity: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

3.2 INSTALLATION

- .1 Install or assemble extinguishers on brackets or in cabinets, as specified, while complying with NFPA 10 Standard.
 - .1 Install fire extinguishers in order that the top of the extinguisher is not higher than 1.53 m above ground level and that the bottom of the extinguisher is not lower than 102 mm from the ground level.
 - .2 Install fire extinguishers in such way that extinguishers are visible from any point.
 - .3 Install a sign to indicate the location of the fire extinguisher, visible at any point, as per Architect's instructions.
- .2 Install cabinets in accordance with manufacturer's recommendations.

3.3 FIELD QUALITY CONTROL

- .1 Ensure that all portable extinguishers are filled before installing.
- .2 Field quality control from manufacturer:
 - .1 The manufacturer must state his recommendations regarding the operation of the products and carry out periodical visits to verify that implementation is achieved as per recommendations.

3.4 CLEANING

- .1 Clean up as per section 01 74 11 - Cleaning.

END OF SECTION