
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