

SECTION 10 26 00
WALL AND DOOR PROTECTION

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies wall guards (crash rails or bumper guards), handrail/wall guard combinations, corner guards and door/door frame protectors and high impact wall covering.

1.2 RELATED WORK

- A. Structural steel corner guards: Section 05 50 00, METAL FABRICATIONS.
- B. Armor plates and kick plates not specified in this section: Section 08 71 00, DOOR HARDWARE.
- C. Color and texture of aluminum and resilient material: Refer to Finish Designations in Drawings.

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer with a minimum of three (3) years' experience in providing items of type specified.
 - 1. Obtain wall and door protection from single manufacturer.
- B. Installer's Qualifications: Installers are to have a minimum of three (3) years' experience in the installation of units required for this project.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Sustainable Design Submittals, as described below:
 - 1. Volatile organic compounds per volume as specified in PART 2 - PRODUCTS.
 - 2. For composite wood products, submit documentation indicating product contains no added urea formaldehyde.
- C. Shop Drawings: Show design and installation details.
- D. Manufacturer's Literature and Data:
 - 1. Handrail/Wall Guard Combinations.
 - 2. Wall Guards.
 - 3. Corner Guards.
 - 4. Door/Door Frame Protectors.
 - 5. High Impact Wall covering.
- E. Test Report: Showing that resilient material complies with specified fire and safety code requirements.
- F. Manufacturer's qualifications.
- G. Installer's qualifications.
- H. Manufacturer's warranty.

1.5 DELIVERY AND STORAGE

- A. Deliver materials to the site in original sealed packages or containers marked with the name and brand, or trademark of the manufacturer.
- B. Protect from damage from handling and construction operations before, during and after installation.
- C. Store in a dry environment of approximately 21° C (70 degrees F) for at least 48 hours prior to installation.

1.6 WARRANTY:

- A. Manufacturer Warranty: Manufacturer shall warranty their wall and door protection for a minimum of five (5) years from date of installation and final acceptance by the Government. Submit manufacturer warranty.

1.7 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - A240/A240M-14.....Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and For General Applications
 - B221-14.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
 - B221M-13.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes (Metric)
 - D256-10.....Impact Resistance of Plastics
 - D635-10.....Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position
 - E84-14.....Surface Burning Characteristics of Building Materials
- C. Aluminum Association (AA):
 - DAF 45-09.....Designation System for Aluminum Finishes
- D. American Architectural Manufacturers Association (AAMA):
 - 611-14.....Anodized Architectural Aluminum
- E. Code of Federal Regulation (CFR):
 - 40 CFR 59.....Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coating
- F. The National Association of Architectural Metal Manufacturers (NAAMM):
 - AMP 500-06.....Metal Finishes Manual
- G. National Fire Protection Association (NFPA):
 - 80-13.....Standard for Fire Doors and Windows
- H. Society of American Automotive Engineers (SAE):
 - J 1545-05(R2014).....Instrumental Color Difference Measurement for Exterior Finishes.
- I. Underwriters Laboratories Inc. (UL):
 - Annual Issue.....Building Materials Directory

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Extruded: ASTM B221, Alloy 6063, Temper T5 or T6. Aluminum alloy used for colored anodizing shall be as required to produce specified color.

2.2 RESILIENT MATERIAL:

- A. Provide resilient material consisting of high impact resistant extruded acrylic vinyl, polyvinyl chloride, or injection molded thermal plastic conforming to the following:
 - 1. Minimum impact resistance of 960.8 N-m/m (18 ft.-lbs./sq. inch) when tested in accordance with ASTM D256 (Izod impact, ft.-lbs. per inch notched).
 - 2. Class 1 fire rating when tested in accordance with ASTM E84, having a maximum flame spread of 25 and a smoke developed rating of 450 or less.
 - 3. Rated self-extinguishing when tested in accordance with ASTM D635.
 - 4. Provide material labeled and tested by Underwriters Laboratories or other approved independent testing laboratory.
 - 5. Provide resilient material for protection on fire rated doors and frames assemblies that is listed by the testing laboratory performing the tests.
 - 6. Provide resilient material installed on fire rated wood/steel door and frame assemblies that have been tested on similar type assemblies. Test results of material tested on any other combination of door and frame assembly are not acceptable.
 - 7. Provide integral color with colored components matched in accordance with SAE J 1545 to within plus or minus 1.0 on the CIE-LCH scales.

2.3 CORNER GUARDS:

- B. Resilient, Shock-Absorbing Corner Guards: Flush mounted type.
 - 1. Snap-on corner guard formed from resilient material, minimum 1.98 mm (0.078-inch) thick, free floating on a continuous 1.52 mm (0.060-inch) thick extruded aluminum retainer. Retainer used for flush mounted type to act as a stop for adjacent wall finish material. Provide appropriate mounting hardware, cushions and base plates as required.
 - 2. Profile: Minimum 50 mm (2 inch) long leg and 6 mm (1/4 inch) corner radius.
 - 3. Height: 1.22 m (4 feet).
 - 4. Retainer Clips: Provide manufacturer's standard impact-absorbing clips.
 - 5. Provide factory fabricated end closure caps at top and bottom of surface mounted corner guards.
 - 6. Flush mounted corner guards installed on any fire rated wall to be installed in a manner that maintains the fire rating of the wall. Provide fire test of proposed corner guard system to verify compliance.
 - 7. Where insulating materials are an integral part of the corner guard system, provide insulating materials furnished by the manufacturer of the corner guard system.
- C. Fabricate stainless steel corner guards of 1.27 mm (.05 inch) thick material conforming to ASTM A240/A240M, Type 302. Install corner guards from floor to ceiling. Form corner guard to dimensions shown on construction documents.

2.4 WALL GUARDS AND HANDRAILS

- A. Resilient Wall Guards and Handrails:
 - 1. Handrail/Wall Guard Combination: Snap-on covers of resilient material, minimum 2 mm (0.078-inch) thick, shall be free-floated on a continuous, extruded aluminum retainer, minimum 1.8 mm (0.072-inch) thick, anchored to wall at maximum 760 mm (30 inches) on center.
 - 2. Wall Guards (Crash Rails): Snap-on covers of resilient material, minimum 2.8 mm (0.110-inch) thick, shall be free-floated over 50 mm (two-inch) wide aluminum retainer clips, minimum 2.3 mm (0.090-inch) thick, anchored to wall at maximum 600 mm (24 inches) on center, supporting a continuous aluminum retainer, minimum 1.6 mm (0.062-inch) thick; or, shall be free-floated over a continuous extruded aluminum retainer, minimum 2.3 (0.090-inch) thick anchored to wall at maximum 600 mm (24 inches) on center.
 - 3. Provide handrails and wall guards (crash rails) with prefabricated and closure caps, inside and outside corners, concealed splices, cushions, mounting hardware and other accessories as required. End caps and corners shall be field adjustable to assure close alignment with handrails and wall guards (crash rails). Screw or bolt closure caps to aluminum retainer.

2.5 HIGH IMPACT WALL COVERING

- A. Fabricate from vinyl acrylic or polyvinyl chloride resilient material minimum 6mm (0.06 inch) thick designed specially for interior use.
- B. Coordinate with door and guard rail protection material and supplier for proper fit, installation and color.
- C. Provide adhesive as recommended by the wall covering manufacturer.

2.6 FASTENERS AND ANCHORS

- A. Provide fasteners and anchors as required for each specific type of installation.
- B. Where type, size, spacing or method of fastening is not shown or specified, submit shop drawings showing proposed installation details.

2.7 HIGH IMPACT THERMOPLASTIC

- A. Nominal thickness: 1/32 inch prior to forming; 3/16 inch with finish texture.
- B. Texture: As indicated on Finish Designations in Drawings.
- C. Color: As indicated on Finish Designations in Drawings.
- D. Adhesive: As recommended by manufacturer.
- E. Weight: 8 pounds per sheet.
- F. Trim accessories:
 - 1. Manufacturer's standard Inside Corner trim, Outside Corner Trim and Edge J-Trim.
 - 2. Color: As indicated on Finish Designations in Drawings.
- G. Nonflammable type adhesive recommended by wall protection manufacturer for particular substrate.

PART 3 - INSTALLATION

3.1 RESILIENT CORNER GUARDS

- A. Install corner guards on walls in accordance with manufacturer's instructions.

3.2 RESILIENT HANDRAIL, WALL GUARD COMBINATIONS, AND RESILIENT WALL GUARDS

Secure guards to walls with mounting cushions or brackets and fasteners in accordance with manufacturer's details and instructions.

3.3 DOOR, DOOR FRAME PROTECTION AND HIGH IMPACT WALL COVERING

- A. Surfaces to receive protection shall be clean, smooth and free of obstructions.
- B. Install protectors after frames are in place but preceding installation of doors in accordance with approved shop drawings and manufacturer's specific instructions.
- C. Apply with adhesive in controlled environment according to manufacturer's recommendations.
- D. Protection installed on fire rated doors and frames shall be installed according to NFPA 80 and installation procedures listed in UL Building Materials Directory; or, equal listing by other approved independent testing laboratory establishing the procedures.

3.4 HIGH IMPACT THERMOPLASTIC

- A. Surfaces to receive plastic panels shall be clean, smooth and free of obstructions.
- B. Layout panels before installing, locating trim accessories and panel joints to allow clearance in accordance with manufacturer's printed instructions.
- C. Apply with adhesive in controlled environment according to manufacturer's recommendations.

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