

PART 1 - GENERAL

- 1.1 RELATED REQUIREMENTS .1 Section 05 12 23 - STRUCTURAL STEEL FOR BUILDINGS.
- 1.2 PRICE AND PAYMENT PROCEDURES .1 Cleaning of structural steel and components, shop painting and field painting will be included in lump sum bid for supply and erection of steel.
- 1.3 REFERENCES .1 Environmental Choice Program (ECP)  
.1 CCD-047-98(R2005), Architectural Surface Coatings.  
.2 Federal Standard (FS)  
.1 FED-STD-595B-89, Colours Used in Government Procurement.  
.3 The Society for Protective Coatings (SSPC)  
.1 SSPC-SP 2-82(R2004), Hand Tool Cleaning.  
.2 SSPC-SP 3-82(R2004), Power Tool Cleaning.  
.3 SSPC-PA 204, Measurement of Dry Coat Thickness with Magnetic Gauges.  
.4 SSPC Good Painting Practices, Volume 1, 4th Edition.
- 1.4 ACTION AND INFORMATIONAL SUBMITTALS .1 Submit in accordance with Section 01 33 00 Submittal Procedures.  
.2 Product Data:  
.1 Submit manufacturer's instructions, printed product literature and data sheets for painting exterior metal surfaces and include product characteristics, performance criteria, physical size, finish and limitations.  
.2 Submit copy of WHMIS MSDS.
- 1.5 DELIVERY, STORAGE AND HANDLING .1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions.
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- .2 Delivery and Acceptance Requirements:  
deliver materials to site in original  
factory packaging, labelled with  
manufacturer's name and address.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- .1 Paint:
  - .1 All paint to be completed in shop,  
prior to shipment.
  - .2 Shop Primer: External Grade, compatible  
with paint system and by same manufacturer  
as part of complete painting system.
  - .3 Two component high build, high solid,  
surface tolerant epoxy maintenance coating,  
color to contrast finish coat.
  - .4 Two component acrylic polyurethane high  
performance finish coat. Color to  
Departmental Representative selection from  
contractor provided samples.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- .1 Verification of Conditions: verify  
conditions of substrates are acceptable for  
painting exterior metal surfaces  
installation in accordance with  
manufacturer's written instructions.

### 3.2 PREPARATION

- .1 New metal surfaces:
    - .1 Clean surfaces of new metal to be  
painted by removing rust, loose mill scale,  
welding slag, dirt, oil, grease and foreign  
substances in accordance with the following:
      - .1 Hand tool cleaning: to SSPC-SP 2.
    - .2 Compressed air to be free of water and oil  
before reaching nozzle.
    - .3 Remove traces of blast products from  
surfaces, pockets and corners to be painted  
by brushing with clean brushes, by blowing  
with clean dry compressed air, or by vacuum  
cleaning.
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- .4 Prior to starting paint application ensure degree of cleanliness of surfaces is to SSPC-Vis 1.
  - .1 Apply primer, paint, or pretreatment after surface has been cleaned and before deterioration of surface occurs.
  - .2 Clean surfaces again if rusting occurs after completion of surface preparation.
  
- .5 Mixing paint:
  - .1 Do not dilute or thin paint for brush application.
  - .2 Mix ingredients in container before and during use and ensure breaking up of lumps, complete dispersion of settled pigment, and uniform composition.
  - .3 Do not mix or keep paint in suspension by means of air bubbling through paint.
  - .4 Thin paint for spraying according to manufacturer's written instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Departmental Representative.
  
- .6 Number of paint coats:
  - .1 Primer: External Grade, compatible and by same manufacturer as part of complete painting system.
  - .2 Intermediate Coat: Two component high boiled, high solid, surface tolerant epoxy maintenance coating, color to contrast finish coat.
  - .3 Finish Coat: Two component acrylic polyurethane high performance. Color to Owner Representative selection from contractor provided samples.

### 3.3 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
  
  - .2 Apply paint by spraying, brushing, or combination of both. Use sheepskins or daubers when no other method is practical in places of difficult access.
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- .3 Use dipping or roller coating method of application when specifically authorized by Departmental Representative in writing.
  - .4 Do not apply paint when:
    - .1 Air temperature is below 5 degrees C or when temperature is expected to drop to 0 degrees C before paint has dried.
    - .2 If temperature drops below 0 degrees remove paint as directed by Departmental Representative and reapply at no extra cost.
    - .3 Temperature of surface is over 50 degrees C unless paint is specifically formulated for application at high temperatures.
    - .4 Fog or mist occur at site; it is raining or snowing; there is danger of rain or snow; relative humidity is above 85%.
    - .5 Surface to be painted is wet, damp or frosted.
    - .6 Previous coat is not dry.
  - .5 Supply cover when paint must be applied in damp or cold weather. Supply, shelter, or heat surface and surrounding air to comply with temperature and humidity conditions specified. Protect until paint is dry or until weather conditions are suitable.
  - .6 Remove paint from areas which have been exposed to freezing, excess humidity, rain, snow or condensation. Prepare surface again and repaint.
  - .7 Apply each coat of paint as continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
  - .8 Brush application:
    - .1 Work paint into cracks, crevices and corners and paint surfaces not accessible to brushes by spray, daubers or sheepskins.
    - .2 Brush out runs and sags.
    - .3 Remove runs, sags and brush marks from finished work and repaint.
  - .9 Spray application:
    - .1 Provide and maintain equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
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- .2 Provide traps or separators to remove oil and water from compressed air and drain periodically during operations.
- .3 Keep paint ingredients properly mixed in spray pots or containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.
- .4 Apply paint in uniform layer, with overlapping at edges of spray pattern.
- .5 Brush out immediately runs and sags.
- .6 Use brushes to work paint into cracks, crevices and places which are not adequately painted by spray. In areas not accessible to spray gun, use brushes, daubers or sheepskins.
- .7 Remove runs, sags and brush marks from finished work and repaint.

.10 Field painting:

- .1 Paint steel structures as soon as practical after erection.
- .2 Touch up metal which has been shop coated with same type of paint and to same thickness as shop coat. This touch-up to include cleaning and painting of field connections, welds, rivets, nuts, washers, bolts, and damaged or defective paint and rusted areas.
- .3 Field paint surfaces (other than joint contact surfaces) which are accessible before erection but which are not to be accessible after erection.
- .4 Where painting does not meet with requirements of specifications, and when so directed by Departmental Representative remove defective paint, thoroughly clean affected surfaces and repaint in accordance with these specifications.

3.4 PROTECTION

- .1 Protect painted surfaces from damage during construction.
  - .2 Protection of surfaces:
    - .1 Protect surfaces not to receive paint.
    - .2 Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats of paint. Remove contaminants from surface and apply paint immediately.
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