

SECTION 09 90 00  
PAINTING AND COATING

PART 1 GENERAL

1.1 SUMMARY

- A. Comply with Division 1, General Requirements.

1.2 REFERENCES

- A. Comply with the latest edition of the following statutes codes and standards and all amendments thereto.
1. ASTM D523 Standard Test Method for Specular Gloss.
  2. Steel Structures Painting Manual Vol. 2 - Systems and Specifications.
  3. Workplace Safety and Health Act of Manitoba.
  4. National Fire Code of Canada.

1.3 SUBMITTALS

- A. List of materials: Prior to commencement of work, submit three copies of list with name of manufacturer, number, grade and quality of materials proposed for use on this project.
- B. Product and safety data sheets: Submit WHMIS MSDS – Material Safety Data Sheets for each paint system. Submit 3 copies of paint system data sheet and three copies of each data sheets.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements:
1. Perform surface preparation and painting in accordance with recommendations of the following:
    - a. Paint manufacturer's instructions.
    - b. SSPC PA 3, Guide to Safety in Paint Applications.
    - c. Federal, provincial, and local agencies having jurisdiction.

1.5 SITE CONDITIONS

- A. Do not paint surfaces at temperatures below 3 degrees C above dewpoint or on surfaces where condensation has or will form due to presence of high humidity and lack of proper ventilation.
- B. Follow manufacturer's product data for application conditions.

## PART 2 PRODUCTS

### 2.1 MATERIALS

- A. Paint and related materials: Akzo Nobel Coatings Ltd. (Canada).
- B. Protective coating system is based on materials manufactured by Akzo Nobel Coatings Ltd. (Canada) and represents standard of quality. Comparable systems by PPG Canada Inc., Sherwin-Williams Company are acceptable.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine surfaces which are to be finished including existing surfaces that require refinishing.
- B. Report surfaces which are defective, or which cannot be prepared by usual sanding and cleaning. Report unsatisfactory site and environmental conditions.
- C. Commence work after corrective work has been completed.

### 3.2 PREPARATION

- A. Protect work performed under separate Sections from paint splatter, overspray and accidental spill.
- B. Take precautions to prevent fire.
- C. Exercise special precautions for safety of workmen applying coating in enclosed areas by meeting the Workplace Safety and Health Act of Manitoba (C.C.S.M. c. W210) .
- D. Comply with instructions on paint manufacturer's Safety Data Sheets.
- E. Provide surface preparation in accordance with SSPC Manual Volume 2 "Systems and Specifications", Chapter 2.
- F. Apply primer within time recommended after surface preparation. Comply with SSPC-PA-1 for application techniques, requirements and precautions.
- G. Comply with CGSB 85-GP Series.
- H. Remove cover plates of service devices, surface hardware, frames of lighting fixtures and other obstructions and reinstall them after painting work is completed. Replace damaged units.
- I. Clean surfaces to be finished from machine, tool or sanding marks, dust, grease, soiling, or any extraneous matter.

- J. Test surfaces for moisture content. Do not apply materials to substrate when moisture content, exceeds 12 percent as determined by accepted moisture testing device.
- K. Ferrous metal surfaces Prepare in accordance with surface preparation specifications outlined by the "Steel Structures Painting Council". Use method indicated in appropriate Protective Coating System.
- L. Shop welds: Grind smooth and rounded and abrasive blast in accordance with SSPC commercial type blasting SP 6. Remove weld flux and other surface contaminants.
- M. Unpassivated galvanized metal and plain aluminum surfaces: Wash thoroughly with Trisodium Phosphate, solution mixed in accordance with manufacturers printed instructions. Rinse thoroughly. Follow instructions on Product Data sheets.
- N. Galvanized surfaces that have been passivated: On small areas use abrasive buffing with bronze wool pad SP 2 or power wire brush SP 3 and clean with solvent. On large areas use brush off blast SP 7 and clean with solvent.
- O. Surfaces primed by item manufacturer: Prepare according to recommendations on Product Data sheets.

### 3.3 APPLICATION

- A. Apply paint materials free from defects.
- B. Mask surfaces where necessary, to prevent contamination or marring of adjacent material, or different protective coating system.
- C. Prevent overspray onto adjacent surfaces or properties.
- D. Do not apply paint over sealant.

### 3.4 APPLICATION OVER SHOP PAINTED METAL SURFACES AND TOUCH UP

- A. Check paint coatings for compatibility with paint with which they are to be overcoated.
- B. Clean areas to be painted using appropriate method.
- C. Minimum coating requirements for touch-up painting:
  - 1. No rusting but prime coat exposed: Sand lightly and feather edges. Apply 1 to 2 finish coats to regain specified minimum dry film thickness.
  - 2. No rusting but prime coat damaged: Clean area to base material, sand lightly and feather edges. Apply prime and finish coats. Sand and feather edges between coats.
  - 3. Rust areas: Clean to original standard of surface preparation. Apply coats as per 2. above. Apply spot finish coat(s) to uniform appearance.

3.5 ITEMS TO BE PAINTED

- A. Equipment Items:
  - 1. Paint shop-primed items.
  - 2. Do not paint PVC, rubber, copper, bronze or brass surfaces.
  - 3. Do not paint stainless steel and aluminum surfaces unless called for in Colour Schedule. Colour for ferrous appurtenances, such as flanges, valves, couplings, and similar items: Match colour of adjacent surfaces.
- B. Paint miscellaneous items according to the Colour Schedule in this Section.
- C. Apply protective treatment to surfaces indicated.

3.6 APPLICATION – GENERAL

- A. Apply finish coats of paint in thickness per coat specified.
- B. If minimum dry film thickness (DFT) in micrometres (microns) is not achieved, apply additional coat(s) until required thickness is obtained.
- C. Apply paint in accordance with SSPC Manual Volume 2 – “Systems and Specifications”, Chapter 5.1.
- D. Sand semi gloss, medium and high gloss finishes lightly between coats, unless otherwise approved by the coating manufacturer.
- E. Gloss terms of following values when tested in accordance with ASTM D523 Test for Specular Gloss:

Gloss Term	Gloss Value
Flat	5 to 20
Eggshell	20 to 40
Semi-gloss	40 to 60
Gloss, medium	60 to 80
Gloss, high	80 to 90

- F. Finish work uniformly as to sheen, gloss, colour and texture free from sags, runs and other defects and under adequate illumination.
- G. Apply materials in accordance with directions and instructions of manufacturers of materials. Do not use adulterants.
- H. High humidity atmosphere of more than 60 percent RH applies to following area(s):
  - 1. All areas.
- I. Use applicable protective coating systems for these conditions as specified.

SEWPCC UPGRADING/EXPANSION PROJECT  
RFP NO. 873-2013

SERVICE USE	PROTECTIVE COATING SYSTEM	SURFACE PREPA— RATION	NO. OF COATS	MIN. D.F.T. PER COAT IN MICRONS
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3.7 SCHEDULE - PROTECTIVE COATING SYSTEMS

By Akzo Nobel Coatings Ltd. (Canada)

A. STEEL & CAST IRON

1.	High humidity, moisture, condensation, spray exposure	<u>PRIME:</u> Devguard 203 Waterborne Epoxy Primer	SP-6	1	50-60
		<u>FINISH:</u> Truglaze 4428 High Build Epoxy Coating		2	50

B. STEEL & CAST IRON & DUCTILE IRON - SUBMERGED

1.	Totally or partially submerged in wastewater	<u>SHOP PRIME:</u> Bar-Rust 233 H Multi-Purpose Epoxy Coating	SP-10	1	150-200
		<u>FINISH:</u> Bar-Rust 233 H Multi-Purpose Epoxy Coating		1	150-200

C. GALVANIZED STEEL - INTERIOR

1.	High humidity, moisture, condensation, spray exposure	<u>PRIME:</u> Devran 203 Waterborne Epoxy Primer	SP-7	1	75-100
		<u>FINISH:</u> Truglaze 4428 Waterborne Epoxy Gloss Coating		2	50-75

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D. GALVANIZED STEEL - SUBMERGED

1.	Totally or partially submerged in wastewater	<u>PRIME:</u> Bar-Rust 235 H Multi-Purpose Epoxy Coating	SP-7	1	150-200
		<u>FINISH:</u> Bar-Rust 233 H Multi-Purpose Epoxy Coating		1	150-200

E. STAINLESS STEEL – NONSUBMERGED (ABOVE WATER LEVEL)

1.	High humidity, moisture, condensation, spray exposure, chlorine vapours	Carboguard 890	SP-7	2	5-7
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3.8 COLOUR SCHEDULE

- A. Refer to Section 01 61 00, Common Product Requirements.

END OF SECTION