

Part 1 General

1.1 REFERENCES

- .1 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Protection Act (CEPA), c. 33
- .2 Environmental Protection Agency (EPA)
 - .1 EPA Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings).
- .3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .4 Master Painters Institute (MPI)
 - .1 MPI Architectural Painting Specifications Manual.
- .5 National Fire Code of Canada
- .6 Society for Protective Coatings (SSPC)
 - .1 SSPC Painting Manual, Volume Two, 8th Edition, Systems and Specifications Manual.
- .7 Transport Canada (TC)
 - .1 Transportation of Dangerous Goods Act (TDGA), c. 34 .

1.2 SUBMITTALS

- .1 Product Data:
 - .1 Submit product data and instructions for each paint and coating product to be used.
 - .2 Provide color samples to the Contract Administrator for approval before application.
 - .3 Submit product data for the use and application of paint thinner.
 - .4 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
 - .5 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation and application instructions.
 - .6 Extra Materials:
 - .1 Submit one 4-litre can of each type and colour of primer and finish coating. Identify colour and paint type in relation to established colour schedule and finish formula.
 - .2 Deliver to the City of Winnipeg and store where directed.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Packing, Shipping, Handling and Unloading:
 - .1 Pack, ship, handle and unload materials in accordance with manufacturer's written instructions.
- .2 Acceptance at Site:
 - .1 Identify products and materials with labels indicating:
 - .1 Manufacturer's name and address.
 - .2 Type of paint or coating.
 - .3 Compliance with applicable standard.
 - .4 Colour number in accordance with established colour schedule.
- .3 Remove damaged, opened and rejected materials from site.
- .4 Storage and Protection:
 - .1 Provide and maintain dry, temperature controlled, secure storage.
 - .2 Store materials and supplies away from heat generating devices.
- .5 Store temperature sensitive products above minimum temperature as recommended by manufacturer.
- .6 Keep areas used for storage, cleaning and preparation clean and orderly.
- .7 Remove paint materials from storage only in quantities required for same day use.

1.4 ENVIRONMENTAL REQUIREMENTS

- .1 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.
- .2 Ventilation: ventilate area of work by use of approved portable supply and exhaust fans.
- .3 Provide temporary heating where permanent facilities are not available to maintain minimum recommended temperatures.
- .4 Apply paint finish only in areas where dust is no longer being generated by related construction operations such that airborne particles will not affect the quality of the finished surface.
- .5 Apply paint only when surface to be painted is dry, properly cured, and adequately prepared.

Part 2 Products

2.1 MATERIALS

- .1 Only paint materials listed in the MPI Approved Products List (APL) are acceptable for use on the project, except where other products are specified.

- .2 Paint materials for each coating formula to be products of a single manufacturer.
- .3 Colour schedule will be determined by the Contract Administrator. Selection of colours will be from manufacturer's full range of colours.
- .4 Paint Finishes: Except for Formula 1 (epoxy) use Master Painters Institute (MPI) finishing formulae as specified below:
 - .1 Formula 1: for wood to receive paint finish: MPI EXT 6.4B - Alkyd GR (semi-gloss) finish premium grade.
 - .2 Formula 2: for shop primed and unprimed ferrous metal surfaces: MPI EXT 5.1D Alkyd G5 (semi-gloss) finish premium grade.
 - .3 Formula 3: for galvanized and zinc-coated metal: MPI EXT 5.3B - Alkyd G5 (semi-gloss) finish premium grade.
 - .4 Formula 4: for concrete, walls and ceilings apply: MPI EXT 3.1A - Latex G5 (semi-gloss) finish premium grade.
 - .5 Formula 5: for concrete floors apply: MPI EXT 3.2D – Alkyd floor enamel #59 low gloss finish premium grade. Sprinkle with clean silica sand to provide slip-resistant surface acceptable to Contract Administrator.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

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

3.2 GENERAL

- .1 Perform preparation and operations for interior painting in accordance with MPI Architectural Painting Specifications Manual except where specified otherwise.
- .2 Apply paint materials in accordance with paint manufacturer's written application instructions.

3.3 EXAMINATION

- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to the Contract Administrator.
- .2 Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.

3.4 PREPARATION

- .1 Protection:
 - .1 Cover or mask floors, walls, and equipment adjacent to areas being painted to prevent damage and to protect from paint drops and splatters. Use non-staining coverings.

- .2 Protect items that are permanently attached such as Fire Labels on doors, frames, and name plates on equipment.
- .2 Surface Preparation: Clean and prepare surfaces in accordance with MPI Painting Specification Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:
 - .1 Remove dust, dirt, and other surface debris by vacuuming, wiping with dry, clean cloths or compressed air.
 - .2 Wash surfaces with a biodegradable detergent and bleach where applicable and clean warm water using a stiff bristle brush to remove dirt, oil and other surface contaminants.
 - .3 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.
 - .4 Allow surfaces to drain completely and allow to dry thoroughly.
- .3 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats. Apply primer, paint, or pre-treatment as soon as possible after cleaning and before deterioration occurs.
- .4 Where possible, prime surfaces of new wood surfaces before installation. Use same primers as specified for exposed surfaces.
 - .1 Apply vinyl sealer to MPI #36 over knots, pitch, sap and resinous areas.
 - .2 Apply wood filler to nail holes and cracks.
- .5 Clean metal surfaces to be painted by removing rust, loose mill scale, welding slag, dirt oil, grease and other foreign substances in accordance with MPI requirements. Remove traces of blast products from surfaces, pockets and corners to be painted.
- .6 Touch up of shop primers with primer as specified in applicable section. Major touch-up including cleaning and painting of field connections, welds, rivets, nuts, washers, bolts, and damaged or defective paint and rusted areas, shall be by supplier of fabricated material.

3.5 APPLICATION

- .1 Apply paint in accordance with manufacturer's application instructions unless specified otherwise.
- .2 Apply each coat of paint as a continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .3 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .4 Sand and dust between each coat to remove visible defects.
- .5 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.

3.6 PUMPS

- .1 Do not apply primer or paint to pumps.

3.7 MECHANICAL/ELECTRICAL EQUIPMENT

- .1 Do not paint exposed conduit, ductwork and hangers, unless otherwise indicated.
- .2 Paint exposed piping. Colour and texture to match adjacent surfaces, except as noted otherwise.
- .3 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .4 Do not paint over nameplates, brass or bronze surfaces or machined surfaces.
- .5 Paint both sides and edges of backboards for telephone and electrical equipment before installation. Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.

3.8 RESTORATION

- .1 Clean and re-install hardware items removed before undertaken painting operations.
- .2 Remove protective coverings and warning signs as soon as practical after operations cease.
- .3 Remove paint splashes on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.
- .4 Protect freshly completed surfaces from paint droppings and dust to approval of the Contract Administrator. Avoid scuffing newly applied paint.
- .5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by the Contract Administrator.

3.9 STANDARDS OF ACCEPTANCE

- .1 Walls: No defects visible from a distance of 1000 mm at 90 degrees to surface when viewed using final lighting source.
- .2 Ceilings: No defects visible from floor at 45 degrees to surface when viewed using final lighting source.
- .3 Piping, valves and pumping equipment: No visible defects from a distance of 1000 millimetres at 90 degrees to surface when viewed using final lighting source.
- .4 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.

END OF SECTION

Part 1 General

1.1 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit manufacturer's instructions, printed product literature and data sheets to the Contract Administrator prior to application of coatings

- .2 Samples:
 - .1 Apply graffiti-resistant coating to mock-up panel specified in Section 04 05 00 – Masonry for review and acceptance.
 - .2 Do not proceed with coating work until Contract Administrator has reviewed and accepted the sample application.

1.2 QUALITY ASSURANCE

- .1 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

1.4 AMBIENT CONDITIONS

- .1 Maintain ambient and structural base temperature at installation area within limits specified by coating manufacturer. Apply coating during dry weather. Do not apply coating to wet or damp surfaces. Ventilation:

Part 2 Products

2.1 MATERIALS

- .1 Graffiti-resistant coating: one component, water based, non-sacrificial, clear sealer consisting of blend of polymers, organo silanes, and siloxanes.
- .2 Acceptable material: Fabrikem Fabrishield Paint Repellent, PR-60 for concrete & stone, PR-61 for clay brick or approved equal in accordance with B7.

2.2 MIXES

- .1 Mix matrix ingredients in accordance with manufacturer's written recommendations.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for coating application installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate.
 - .2 Inform the Contract Administrator of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from the Contract administrator.

3.2 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
- .2 Prepare and clean substrate surfaces in accordance with coating manufacturer's printed instructions.
- .3 Take moisture tests on substrates to receive coating to ensure moisture levels are within limits specified by coating manufacturer.
- .4 Apply coating using low-pressure spraying apparatus, in accordance with manufacturer's instructions at manufacturer's recommended coverage rate:
 - .1 Concrete & stone: 175 – 225 ft²/gal.
 - .2 Clay brick: 100 – 150 ft²/gal.
- .5 Increase coverage depending on surface porosity, absorption, and surface profile.
- .6 Apply in uniform, even coats to fully wet substrate.
- .7 Allow area to dry completely before applying additional coats

3.3 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by aggregate wall coating application installation.

END OF SECTION