

Part 1 General**1.1 Summary**

- .1 Unless otherwise indicated, follow the standards below when specifying painting or re-painting. These standards are not intended to restrict or replace professional judgment.
- .2 This Section includes surface preparation and field painting of the following:
 - .1 Exposed interior and exterior items and surfaces.
 - .2 Surface preparation, priming, and finish coats.

1.2 Design Requirements

1. Paint materials listed in the Master Painters Institute (MPI) Approved Products List (APL) are acceptable.
2. Paint materials for paint systems shall be products of a same manufacturer.
3. All painting shall be zero (0) VOC, except for dark color painting and exterior painting that shall be low VOC (max 50g/L).
4. All stains shall be low VOC (max 250 g/L). All varnishes shall be low VOC (max 230 g/L).
5. Painting colorant shall contain no glycol and no other toxicity.
6. All surface finishes for walls, doors and frames shall be 20% to 30% gloss for maintenance purposes.
7. Recycle content painting is preferred if color wanted is available in that type of product.
8. All sealers shall be in accordance with CAN/ONGC-1GP-119 2000 and approved by finish product manufacturer.
9. Apply coatings at manufacturer's recommended spreading rate to achieve indicated dry film thicknesses.
10. Before applying finish product on wood surfaces, test product by first applying on small area of surface to verify compatibility between product and surface.
11. Avoid painting poured in concrete (Approval required).

Part 2 Products **2.1 Preferred Products**

1. The threshold level of compliance with the General Emissions Evaluation for paints and coatings applied to walls, floors, and ceilings and VOC content requirements for wet applied

products standards listed in **01 84 19** for interior paints and coatings applied on site must be met by at least 90% by volume for emissions, and by 100% for VOC content.

2. For products with low VOC emissions that may contribute to LEED® v4 EQ Credit Low-Emitting Materials, refer to:
 - .1 SCS Global Services www.scsglobalservices.com/certified-green-products-guide
 - .2 Pharos Project <https://www.pharosproject.net>

3. For products with a manufacturer inventory and/or certified Cradle to Cradle (C2C) and/or with Health Product Declarations (HPDs), for LEED® v4 MR Credit Building Product Disclosure and Optimization – Material Ingredients, refer to:
 - .1 Declare Product Database www.living-future.org/declare-products
 - .2 Cradle to Cradle Products Innovation Institute <http://www.c2ccertified.org/products/mhcregistry>
 - .3 HPD Library <http://hpd.smithgroupjir.org>
 - .4 Pharos Project <https://www.pharosproject.net>

4. For products from manufacturers with Corporate Sustainability Reports (CSRs), which may contribute to LEED® v4 MR Credit Building Product Disclosure and Optimization – Sourcing of Raw Materials, refer to:
 - .1 GRI Sustainability Disclosure Database <http://database.globalreporting.org/search>

5. Materials that are locally sourced (extracted, manufactured, and purchased) within 160 km (100 miles) are preferred and will increase cost values for credit calculations in the Materials and Resources Building Product Disclosure and Optimization credits.

2.2 General Painting:

1. Material Compatibility: Specify block fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
2. Acceptable products: “Ecosource” as manufactured by SICO, “Ecospec” and “Aura”, as manufactured by Benjamin Moore, “Harmony” as manufactured by Sherwin Williams and products manufactured by Boomerang.

2.3 Specific Painting

1. Walls or Ceiling
 - .1 General Spaces: Concrete blocks and Gypsum Wall: New Walls
 - .1 Sealer: Acceptable products: “#870-177” as manufactured by SICO, or approved equivalent.
 - .2 Two (2) coats, latex melamine finish: acceptable products: “Ecosource #series 855” as manufactured by SICO or approved equivalent.
 - .2 General Spaces: Concrete blocks and Gypsum Wall: Existing Walls

- .1 Two (2) finish coats latex melamine finish: acceptable products: "Ecosource # 855" as manufactured by SICO or approved equivalent.
- .3 General Ceilings: Existing/New Ceiling
 - .1 Sealer: Acceptable products: "#870-177" as manufactured by SICO, or approved equivalent.
 - .2 Two (2) finish coats latex flat finish: acceptable products: "Ecosource #851" or "Expert #871" as manufactured by SICO, or approved equivalent.
- .4 Administrative/Office Spaces: New Walls
 - .1 Sealer: Acceptable products: "#870-177" as manufactured by SICO, or approved equivalent.
 - .2 Two (2) coats latex velour finish: Acceptable products: "Ecosource #853" or "Expert #873" as manufactured by SICO or approved equivalent.
- .5 Administrative/Office Spaces: Existing Walls
 - .1 Two (2) coats latex velour finish: Acceptable products: "Ecosource #853" or "Expert #873" as manufactured by SICO or approved equivalent.
- .6 Classrooms Spaces: New Walls
 - .1 Sealer: Acceptable products: "#870-177" as manufactured by SICO, or approved equivalent.
 - .2 Two (2) coats latex melamine finish: Acceptable products: "Ecosource #855" as manufactured by SICO or approved equivalent.
- .7 Classrooms Spaces: Existing Walls
 - .1 Two (2) coats latex melamine finish: Acceptable products: "Ecosource #855" as manufactured by SICO or approved equivalent.
- .8 Animal Facilities and Laboratories: New Walls
 - .1 Sealer: acceptable products: "#870-177" as manufactured by SICO, or approved equivalent. "K253" latex sealling primer or "Eco Spec WB K372" interior latex primer as manufactured by Benjmain Moore, or approved equivalents.
 - .2 Two (2) coats, epoxy 2 comp: acceptable products: "Sierra S50/ water base epoxy 2 comp" as manufactured by SICO, "Duroplast 150" as manufactured by Duochem, "KP 43" epoxy gloss coating as manufactured by Benjamin Moore or approved equivalent.
- .9 Animal Facilities and Laboratories: Existing Walls
 - .1 Two (2) coats, epoxy 2 comp: acceptable products: "Sierra S50/ water base epoxy 2 comp" as manufactured by SICO, "Duroplast 150" as manufactured by Duochem, "KP 43" epoxy gloss coating as manufactured by Benjamin Moore or approved equivalent.
- .10 Washrooms: New Walls
 - .1 Sealer: Acceptable products: "#870-177" as manufactured by SICO, or approved equivalent.
 - .2 Two (2) coats latex melamine finish: Acceptable products: "Ecosource #855" as manufactured by SICO or approved equivalent.
- .11 Washrooms: Existing Walls
 - .1 Two (2) coats latex melamine finish: Acceptable products: "Ecosource #855" as manufactured by SICO or approved equivalent.

2. Floors

- .1 Interior walkway concrete floors: acceptable products: "Duroplast 100" as manufactured by Duochem, or approved equivalent.
- .2 Animal Facilities "Lave-cage" Rooms: Floors: acceptable products: "Ureclad 44" as manufactured by Duochem, or approved equivalent.
- .3 Animal Facilities and Laboratories: Floors: acceptable products: "Sierra S40 Rust-Oleum44" as manufactured by SICO, "Duochem 7105" as manufactured by Duochem and their primers, or approved equivalent. Total minimum thickness: 30 mils.
- .4 Mechanical Rooms Floors
 - .1 For mechanical room without storage, acceptable products: Two (2) coats urethane epoxy type "Sikafloor 265" (20 mils), as manufactured by Sika or approved equivalents.
 - .2 For mechanical room with storage, acceptable products: Two (2) coats urethane epoxy type "Sikafloor 265" (20 mils), as manufactured by Sika or approved equivalents.
- .5 Concrete slab on grade: acceptable products: Two (2) coats "Sikafloor 265" (20 mils), as manufactured by Sika, or approved equivalent. Choose another product if chemical resistance is needed.
- .6 Wood floors
 - .1 Historical building, old wood flooring:
 - .1 If repairs have to be done with new planks, use a colorant stain on all surfaces before varnishing for a final uniformity.
 - .2 Loose floor boards have to be replaced by new planks.
 - .3 Filler products are to be avoided.
 - .2 Sanding
 - .1 Dustless sanding machine has to be used.
 - .2 Light weight machine has to be used (-200lb).
 - .3 Hand scraping has to be done on perimeters.
 - .3 Varnish
 - .1 Verify with manufacturer compatibility of the product with the existing wood specie and finish before specifying.
 - .2 Shall be low VOC (max 200g/L).
 - .3 Test durability to meet: ASTM D4060.
 - .4 Sealer: Acceptable product: 'Premium sealer' sealing agent, apply two (2) coats, as manufactured by Schwartz Chemicals Corporation, or approved equivalent.
 - .5 two (2) coats: "81C50 semi-gloss H2O polyurethane" finish product as manufactured by Schwartz Chemicals Corporation, or approved equivalent.
- .7 Level floors with cove bases (For Heavy-Duty Waterproof Areas):
 - .1 Prepare all new and existing concrete surfaces with abrasive blasting equipment (Blastrac).
 - .2 Grind surface imperfections to obtain a smooth and level surface.
 - .3 Apply (1) coat: acceptable products: "Rust-oleum prime and seal primer penetrating (5-8 mils)" as manufactured by SICO, "Duochem 576 primer penetrating" as manufactured by Duochem, or approved equivalent.

- .4 Apply (1) coat: acceptable products: "Rust-oleum overkrete HD", 6 mm (1/4") non-porous mortar with 100 mm (4") high "Rust-oleum overkrete cove base mortar" as manufactured by SICO, "Duochem 9400 with "Duochem 5235" as manufactured by Duochem, or approved equivalent.
 - .5 Apply two (2) coats: 15 mils dry film thickness per coat for smooth finish: acceptable products: "Rust-oleum overkrete xtra E-100S" as manufactured by SICO, "Duochem 7105" as manufactured by Duochem, or approved equivalent.
or
 - .6 Apply one (1) coat: 25 mils dry film thickness per coat for semi-smooth finish: acceptable products: "Rust-oleum overkrete xtra E-100S" as manufactured by SICO, "Duochem 7105" as manufactured by Duochem, or approved equivalent.
or
 - .7 Apply one (1) coat: 20 mils dry film thickness per coat for non-skid finish: acceptable products: "Rust-oleum overkrete xtra E-100S" as manufactured by SICO, "Duochem 7105" as manufactured by Duochem, or approved equivalent.
 - .8 Sloped floors with cove bases (for Heavy-Duty waterproof Areas):
 - .1 Prepare all new and existing concrete surfaces with abrasive blasting equipment (Blastrac).
 - .2 Grind surface imperfections to obtain a smooth and level surface.
 - .3 Apply one (1) coat: acceptable products: "Rust-oleum prime and seal primer penetrating (5-8 mils)" as manufactured by SICO, "Duochem 576" as manufactured by Duochem, or approved equivalent.
 - .4 Before the primer has cured, apply grout to form a sloped floor to drain, 3 mm per 305 mm (1/8" per ft.) slope, with a minimal thickness of 3 mm (1/8"):
 - .1 Acceptable products: "Rust-oleum overdrive epoxy grout" as manufactured by SICO, "Duochem 9400" as manufactured by Duochem, or approved equivalent.
 - .5 Once the epoxy grout has set, apply "Rust-oleum overkrete HD 6 mm (1/4") non-porous mortar with 100 mm (4") high "Rust-oleum overkrete cove base mortar", "Duochem 9400" with "Duochem 5235" as manufactured by Duochem, or approved equivalent.
 - .6 Apply two (2) coats: 15 mils dry film thickness per coat for smooth finish: acceptable products: "Rust-oleum overkrete E-100S" as manufactured by SICO, "Duochem 7105" as manufactured by Duochem, or approved equivalent.
3. Doors and Frames
- .1 Wood door and frame
 - .1 One (1) coat primer: acceptable product: "Sierra Griptec" as manufactured by SICO, "No 4000" no odor alkyde sealling primer or "Ultra Spec 500 K534" latex sealing primer as manufactured by Benjamin Moore, or approved equivalent.
 - .2 Two (2) finish coats DTM acrylic urethane enamel: acceptable products: "Sierra Metalmax" as manufactured by SICO, "Ultra Spec 500 K539" latex acrylic, semi-gloss finish as manufactured by Benjamin Moore, or approved equivalent.

- .2 Metal door and frame
 - .1 Two (2) finish coats DTM acrylic urethane enamel: acceptable products: "Sierra Metalmax" as manufactured by Rust Oleum, "Corotech DTM V331" acrylic as manufactured by Benjamin Moore, or approved equivalents.
- 4. Metal surfaces, resistant to high temperature
 - .1 Two (2) finish coats DTM acrylic urethane enamel: acceptable products: "Sierra Metalmax" as manufactured by Rust Oleum, or approved equivalents.
- 5. Exterior Stainless Steel
 - .1 Two (2) coats: acceptable products: "Corotech V500" as manufactured by Benjamin Moore or approved equivalent.
- 6. Exterior Galvanised Steel
 - .1 One (1) coat: acceptable products: "Corotech V110" metal primer as manufactured by Benjamin Moore or approved equivalent.
 - .2 Two (2) coats: acceptable products: "Corotech DTM V330" gloss enamel as manufactured by Benjamin Moore or approved equivalent.

Part 3 Part 3 - Execution

3.1 Preparation

- 1. Surfaces to Be Painted:
 - .1 Paint all new and existing exposed-to-view surfaces, except surfaces specifically noted as unpainted, all as per the Finish Schedule. Consult the Project Manager before painting any surface or material not included in listed formulae.
 - .2 DO NOT paint stainless steel, brass, baked enamel, aluminum, porcelain enamel, plastic laminate, glass, tile or face-brick surfaces, equipment name and/or specification plates, washroom fixtures, toilet partitions, and other factory-finished items, unless noted otherwise.
 - .3 All doors shall be painted or stained (refer to Door Schedule). Paint all glazing rebates, and wood and metal stops, before installation of glass.
 - .4 Paint all wall mounted shelving and interior of drawers, cupboards and cabinet work (unless noted otherwise) to match the walls.
 - .5 Paint all exposed pipes. Mechanical and electrical equipment, panels, and the like, shall remain in factory-applied finishes.
- 2. Typical Floors:
 - .1 Scrape loose paint and repair surfaces with materials compatible with surface composition then sand and clean surfaces.
 - .2 Ensure that all surfaces are dry, clean, free from dust, grease, wax, soap, rust, mildew, tool and machine marks, insects, etc., by washing with Trisodium Phosphate.
 - .3 Application as per manufacturer's specification.

3. Walls, Ceilings, Doors, Frames, Wood Surfaces, etc.:
 - .1 Scrape loose paint and repair surfaces with materials compatible with surface composition then sand and clean surfaces.
 - .2 Ensure that all surfaces are dry, clean, free from dust, grease, wax, soap, rust, mildew, tool and machine marks, insects, etc., by washing with Trisodium Phosphate.

END OF SECTION