



# GUIDELINE FOR WRITING SPECIFICATIONS WHEN USING CSP Paint Strippers

Select Relevant Selection

## Division 09900 - Paints and Coatings

### Part 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Work of this section shall be governed by the Contract Documents. Provide materials, labor, equipment, and services necessary to furnish, deliver, and install all work of this section as shown on the drawings, as specified herein, and/or as required by job conditions.

#### 1.2 SUMMARY OF WORK

- A. This section includes, but is not limited to, the following:
  - a. Paint removal by chemicals from all historic surfaces including smooth and ornamental wood, metal, masonry, concrete, and brick. Mock-ups will determine the best appropriate method.
- B. Protection of concrete mosaic, metals, stone, and other adjacent materials during all other work activities in related sections, below.
- C. Visual Requirements:
  - a. Maintain aesthetic or historic qualities of Project by protecting Work designated to remain.

#### 1.3 REFERENCES

- A. Manufacturer's specifications and instructions.

#### 1.4 SUBMITTAL

- A. Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data: Submit manufacturer's specifications and installation instructions for products used including finishing materials and methods.
- C. Submit manufacturer's technical data sheet for each product indicated including chemical analysis and recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.
- D. Submit a detailed plan for proposed paint removal methods for each type of paint removal Work, for review and approval by owner or owner's representative's
- E. Submit a work plan describing chemicals used to strip paint, procedures used to provide inlets, and capture, store, sample and dispose of all waste generated throughout this project.
- F. Samples: Provide sample installation of paint removal. Locations per the owner or owner's representatives directions.

#### 1.5 QUALITY ASSURANCE

- A. Mock-ups: Prepare sample for each type of removal on the appropriate material indicated to be stripped. See 1.6 Test Panels.
- B. Provide at least one person who shall be present at all times during the execution of the work of this section, who shall be thoroughly familiar with the specified requirements, and the materials and methods needed for their execution, and who shall direct all work performed under this section.
- C. Provide adequate numbers of workers skilled in the necessary crafts and properly informed of the specialized methods and materials to be used in this work.

## 1.6 TEST PANELS

- A. The Contractor shall arrange for preparing test panels to determine the appropriate thickness at which the product is applied to the surface and the time values for removing the product. Size of testing area shall be no smaller than 1' SF.
- B. Contractor shall prepare a written report detailing results of testing including description of methods employed, materials, concentrations of chemicals, dwell times and other elements of test procedures.
- C. Each test panel must be carefully labeled, charted, and photographed.
- D. Approved test panels will become a part of the Work, and serve as the quality standard for similar type work on this project. Additional test panels, up to a maximum of 3 for each type of cleaning, shall be prepared if necessary to obtain satisfactory results.
- E. Notify the owner's representative seven (7) days in advance of the dates and time when the test panels will be installed.
- F. As the Work progresses along the building, the Contractor shall perform test panels to confirm which paint removal product will be best for that location being worked on. Designated areas should take into consideration that the paint removal product will react differently based on temperature, substrate and type of coating. Prior repairs, remaining paint layers, type of paint, and sun exposure may not be uniform on the building and will potentially need separate removal products, amounts of chemical removers, and dwell times. Size of testing area will be no larger than 5' SF.

## 1.7 PROJECT/SITE CONDITIONS

- A. Contractor shall be responsible for protecting all existing adjacent materials such as doors, windows, flashings, roofing, and other existing material assemblies.
- B. Contractor shall be responsible for the repair of all damaged adjacent materials due to the execution of the cleaning work at no additional expense to the Owner. Repairs shall be made by qualified mechanics skilled in the type of repairs required, to the satisfaction of the owner's representative
- C. Protect adjacent areas and surfaces not being cleaned with barriers suitable for the chemical cleaners being used. Cover air intakes, air conditioning vents and similar openings that may come in contact with the chemical cleaners, residues, and their fumes. Leave covers in place throughout the cleaning process.
- D. Protect trees, plants, foliage, storm sewers, and surrounding surfaces from paint removers, neutralizers, residue, and rinse waters.
- E. Take appropriate precautions to avoid harm to building occupants, pedestrians and nearby property. Terminate work when wind drift may injure passerby or damage vehicles and adjacent property.
- F. Safety: For any number of reasons it is essential to maintain a high degrees of worker and occupant safety while working with hazardous materials. Most of the processes used to remove lead paint on this scale will require a full time industrial hygienist to test air quality and lead levels in all persons entering the contaminated area.

## **PART 2 – PRODUCTS**

### **2.1 MATERIALS**

- A. CHEMICAL STRIPPERS
  - a. Environmentally safe, water based paint strippers, free of flammable solvents and fumes, caustics and MUST NOT contain N Methyl Pyrrolidone (NMP). Products must work on epoxy paints, cementitious paints, exotic coatings, and oil-base coatings. Acceptable products available through Cathedral Stone Products; contact Technical Reps - Tel: 410-782-9150; fax: 410-782-9155; website: [www.cathedralstone.com](http://www.cathedralstone.com) email: [info@cathedralstone.com](mailto:info@cathedralstone.com).
- B. Specialty Materials For Delicate Items
  - a. Product(s) shall be chosen based upon test samples prepared by Contractor on-site.
- C. Miscellaneous Equipment
  - a. Stiff natural bristle brushes

- b. Soft clean rags
- c. Clean, potable water
- d. Rubber gloves
- e. Eye and skin protection
- f. Putty knives or paint scrapers, metal, and plastic.
- g. Airless Spray equipment with adjustable pressure (between 100-600 psi.) and a 0.19" or larger fan tip outfitted with chemical resistant packings. Titan 640i or larger pump or equal
- h. Standard Pressure washers with tip pressures no greater than 3600 psi at the tip.
- i. Wire Brush (for removing rust bloom only; for metal surfaces; NEVER ON MASONRY).

### **PART 3 – EXECUTION**

#### **3.1 PREPARATION**

- A. Protect adjacent surfaces with paper, drop cloths, and other means. Special protection should be applied to window, concrete mosaic ceiling, and other historic material should be applied.
- B. When removing paint from metallic surfaces make sure surface has been mechanically cleaned free of rust with wire brush. Prime rusted areas as soon as possible to prevent recurrence of rust bloom.
  - a. Refer to Part B Specifications, Section 02064 for removal requirements involving lead-based paint.

#### **3.2 GENERAL APPLICATION OF INITIAL CHEMICAL TREATMENT (For paint removal from concrete, excluding metal railings)**

- A. Follow manufacturers' instructions.
- B. Plan to remove paint in sections that can easily be applied in one working shift
- C. Clearly mark or identify time of application and dwell time.
- D. Remove paint stripper in the same sequence of sections in which it was applied.
- E. The contractor shall have adequate staff available to monitor the process at the end of the dwell time cycle and who will be available to remove the paint stripper. Do not leave chemicals on the building past their designated dwell time.
- F. General Instructions For Gel Based Paint Removal Products
  - a. Rely on information from test panels to determine which chemical product to use.
  - b. Determine the dry film thickness of the coating to be removed.
  - c. Cover adjacent areas during spray application. Typical masking is required for only the adjacent 3 feet.
  - d. Cover ground directly beneath application to collect drips from application of stripper and to collect removed paint.
  - e. Apply with airless spray equipment or brush approximately 30-50% thicker than the film thickness of the coating to be removed. (Test patches will make the determination of application thickness). Covering of the stripper application is only required for applications in direct sunlight, high wind, high heat (greater than 85°F), or if inclement weather is expected to prevent stripper from drying or being washed off. Only if required, use 1 mil polyethylene plastic or other suitable material, otherwise leave uncovered. DO NOT rub or work plastic covering into surface of the stripper, merely hang plastic barrier covering over surface. Dwell time can be between 4-24 hours depending on the thickness and type of coating being removed. Remove plastic covering (if applied) and remove coating with suitable hand tools such as scrapers.
  - f. Leave on for up to 24 hours or longer according to test patch findings. Typical architectural coatings are removed by late afternoon application of stripper and removal the next morning. Typical architectural applications require two (2) applications.
  - g. Remove as much residue as possible with tools before clean-up procedure.

- h. Collect paint and remaining residue, put into plastic bags and dispose of in compliance with Federal, State and local regulations. Never dispose of stripper or stripper residue in steel drums unless completely dry.
- i. Rinse surface with pressure washer and surfactant cleaner, **working from the bottom up**. Collect water if required by environmental guidelines. If location does not allow pressure washing, clean all surfaces with clean rags saturated in denatured alcohol, cycling rags often, to remove any stripper residue. Dispose of rags in accordance with Federal, State and Local regulations.

### 3.4 GEL PAINT REMOVAL PRODUCT CONTAINMENT & REMOVAL (IF REQUIRED)

- A. Use the following outline to develop a containment area:
  - a. First Layer: Canvas painter's drop cloth. These are used to cushion the polyethylene that will be installed on top.
  - b. Second layer: clear polyethylene at least 6 mil. X 20' x 100' to be installed above the canvas.
  - c. Third layer: Black 6-mil. X 20' x 100', construction grade to be installed on top of both the canvas and clear polyethylene.
  - d. Install as follows:
    - 1. At base of building, take spray adhesive and spray underside 4 to 6" on all horizontal surfaces. Spray vertical surfaces if horizontal surfaces are rough or have loose material.
    - 2. Once dry, take duct tape and apply it smoothly from the point where the vertical and horizontal surfaces converge for a distance of approximately 6".
    - 3. Let tape dry to surface sprayed with adhesive. Bond between tape and spray adhesive should be firm and without voids.
    - 4. Lay out a layer of canvas from the edge where both vertical and horizontal surfaces meet. Do this for a distance of at least 10' away from all vertical surfaces.
    - 5. Lay out a layer of polyethylene plastic. Using a roll of 4" duct tape, apply 2" of the roll along the edge of the clear polyethylene and attach the remaining 2" width of tape to the previously applied duct tape (see direction 2) that has been attached to the base of the building.
    - 6. Apply the final layer of black 6 mil. Polyethylene plastic over the layer of clear plastic and the layer of canvas (using the technique described in direction 4).
    - 7. Outside of the containment area, take 4" plastic in 10' sections and roll the clear black polyethylene over tubes and under so that when you have finished it will be possible to contain all liquids used in the stripping procedure.
- B. Up to two applications of the chemical removal product may be made on the building with no additional charge to the Owner.

### 3.5 PAINT REMOVAL AND SURFACE PREP

- A. No work shall commence until methods and materials for each type of cleaning are approved by the owner's representative as determined by test panels. Repeat test panels as required to demonstrate means and methods to acceptable levels as determined by the owner's representative.
- B. Pressure washing shall be at a pressure, which will not damage the surface, yet provide effective removal.**
- C. Personnel performing cleaning operations shall adhere to the Personnel Protective Equipment (PPE) stipulated on the MSDS for products being used.
- D. Exercise caution during cleaning operations to avoid wind drift of materials to adjacent properties. Persons, or cars below. Schedule cleaning operations for times or days when risk to pedestrians or vehicles is at a minimum.

- E. Generally, treat surfaces by directing low pressure water washing over the surface as determined by test panels.
- F. Use only methods and materials determined during testing phase and approved by owner's representative. Clean surface to degree accepted by owner's representative. Do not permit cleaning to continue if methods and materials employed results in any permanent damage to surfaces.
- G. Do not proceed with surface preparation until proper protection has been installed for adjacent materials.
- H. Contractor shall reclaim, characterize and dispose of all removed paint and stripper residue used in conjunction with this project in accordance with applicable laws. Disposal sites shall be approved by the owner's representative.

### **3.6 CLEAN UP**

- A. During the work, remove from the site discarded cleaning and coating materials, rubbish, cans and rags at the end of each workday.
- B. Upon completion of work, remove all protective coverings and coatings, and clean window glass and other spattered surfaces. Remove spattered coatings by proper methods as recommended by manufacturer, using care not to damage adjacent surfaces.

## **PART 4 – CONTRACTOR QUALITY CONTROL**

### **4.1 QUALITY CONTROL**

- A. The implementation of a Contractor Quality Control Program does not relieve the Contractor from the responsibility to provide work in accordance with the Contract Documents, applicable codes, regulations, and governing authorities. The Contractor Quality Control Program shall include, but not be limited to, the elements herein. These elements are provided only as a minimum starting point for the Contractor to use to generate the complete Contractor's Quality Control Program. .

END OF SECTION

02/2012