

ITEM 16573.74 M - CLEANING AND COATING WEATHERING STEEL

DESCRIPTION

The work shall consist of blast cleaning weathering steel to remove rust and contaminates and then coating the steel with two coats of Weather-Act. All blast cleaning shall be done using wet techniques, either water blasting with injected grit or abrasive blasting with injected water. The Contractor should expect cleaning the weathering steel to the specified standards to require greater effort than usually required to clean non-weathering steels.

The Contractor shall enclose the work areas to contain spray from the blasting and washing operations and capture water and solid waste.

MATERIALS

Water shall be potable, meeting the requirements of § 712-01. Recycling of water shall not be allowed without treatment to remove chlorides and other salt contaminates.

Chlor*Rid - a proprietary liquid soluble salt remover available from Chlorid*Rid International, PO Box 908, Chandler, Ar, 85244. 800-422-3217 or 480-821-0039

Soluble Salt Test Kits - provide the Engineer with test kits to allow sampling the salt levels on the cleaned steel at 40 locations. The kits shall be Chlor*test by Chlor*Rid International or equal approved by the Director, Materials Bureau.

Weather-Act - Weather-Act is manufactured by Sumitomo Metal Industries of Tokyo, Japan. The manufacturer has agreed to supply the product at no cost to the Contractor.

Enclosures and ground covers shall consist of plastic sheeting, tarps, or similar water containing materials.

CONSTRUCTION DETAILS

The Contractor shall clean each girder of the span over I390 to the standard listed and use a treatment solution in the final wash water as shown in the table.

All water from the blast and post blast treatments shall be contained, collected, and clarified prior to disposal. If water is recycled, the chloride content of the recycled water may not exceed 10 ppm, Chlor*Rid may be added to the water to meet this standard. The Contractor shall provide the Engineer with test kits to measure the chloride content of the water if he elects to recycle.

The surface profile of the cleaned steel shall not exceed 25 μm . In order to efficiently produce such a small profile the contractor may need to remove the rust with one grade of abrasive and use a finer grade to produce the required profile.

At the start of the work the Contractor shall clean 600x600 test panels to each of the specified standards to serve as a visual job standards. These test panels shall be coated with a clear spray to preserve their condition.

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BEAM #	CLEANING STANDARD	POST BLAST CLEANING	COATING
1	Commercial Blast Cleaning SSPC- SP6	Wash to remove all debris	Weather-Act
2	Commercial Blast Cleaning SSPC- SP6	Pressure wash at min 3000 psi with 1 to 100 solution of Chlor*Rid in water	Weather-Act
3	Near White Blast Cleaning SSPC-SP10 (see note)	Wash to remove all debris	None
4	Near White Blast Cleaning SSPC-SP10 (see note)	Wash to remove all debris	Weather-Act
5	Near White Blast Cleaning SSPC-SP10 (see note)	Pressure wash at min 3000 psi with 1 to 100 solution of Chlor*Rid in water	Weather-Act

Note: Apply the standard when viewing from 0.6 meters without magnification.

Where pressure washing is required, the nozzle shall be held no more than 150mm from the steel surface and the wand shall be moved parallel to the surface.

Following blast cleaning and post blast treatment, the Engineer shall be provided access to perform soluble salt tests. These tests are for information only, they are not a standard for acceptance of the work.

The Weather-Act products contains toluene, isopropyl alcohol, chromic sulfate, and zinc chromate hydroxids. The Contractor's Health and Safety Plan shall specifically address the issues of working with a probable carcinogenic material and flammable liquids and vapors.

Apply Weather-Act P8 to dry steel within 12 hours of post-blast treatment to a minimum thickness of 20µm. Oil-free compressed air may be used to speed drying the steel. Apply Weather-Act F after the P8 is dry to the touch to a minimum thickness of 10µm. Normal drying time for P8 is 6 hours at 20° C. Mix and apply the Weather-Act products in accordance with the manufacturer's instructions and this specification.

METHOD OF MEASUREMENT

Payment will be made at the lump sum price bid for this work.

BASIS OF PAYMENT

The lump sum price bid shall include the cost of furnishing all labor, materials and equipment necessary to complete the work.

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