

structural as well as non-structural and the line when prepare dint eh same thickness of plaster shall not be measured separately and shall be covered by respective plaster items.

#### **4.9 PAINTING**

##### **Scope of work:**

The work covered under these specifications consist of furnishing the various types of paints and also the workmanship for these items, in strict compliance with these specifications, which are given in detail hereinafter with the item of schedule of quantities.

##### **Materials:**

Paints, oils varnishes etc. of approved brand and manufacture shall be used. Ready mixed paints as recovered from the manufacturer without any admixture shall be used. If for any reason, thinning is necessary in case of ready mixed paint, the brand of thinner recommended by the manufacturer or as instructed by the Engineer-in-charge shall be used. Approved paints, oils or varnishes shall be brought to the site of work by the contractor in their original containers in sealed condition. The materials shall be brought in at a time in adequate quantities to suffice for the whole work or atleast a fortnights work. The materials shall be kept in the joint custody of the contractor and the Engineer-in-charge. The empties shall not be removed from the site for work, till the relevant item of work has been completed and permission obtained from the Engineer-in-charge. The contractor shall associate the chemist of paint manufacturers before commencement of work, during and after the completion of work who shall certify the suitability of the surface to receive painting and the paint before use etc.

##### **Commencing Work :**

##### **Scaffolding :**

Wherever scaffolding is necessary, it shall be erected on double supports ties together by horizontal pieces, over which scaffolding planks shall be fixed. No bellies, bamboos or planks shall rest on or touch the surface which is being painted. Were ladders are used, pieces of old gunny bags shall be ties on their tops to avoid damage or scratches to walls. For painting of the ceiling, proper stage scaffolding shall be erected. Painting shall not be started until and unless the Engineer-in-charge has inspected the items of work to be painted, satisfied himself about their proper quality and given

his approval to commence the painting work. Painting, except the priming coat, shall generally be taken in hand after all other builders work, practically finished. The rooms should be thoroughly swept out entire building cleaned up atleast one day in advance of the paint work being started.

**Preparation of Surface :**

The surface shall be thoroughly cleaned. All dirt, rust, scales, smoke and grease shall be thoroughly removed before painting is started. Minor patches if any in plastered / form finished surfaces shall be repaired and finished in line and level in C.M/ 1:1 and cracks and crevices shall be filled with approved filler, by the contractor at no extra cost to the Department. The prepared surface shall have received the approval of the Engineer-in-charge after inspection, before painting is commenced.

**Application :**

Before pouring into smaller containers for use, the paint shall be stirred thoroughly in its containers. When applying also, the paint shall be continuously stirred in the smaller containers so that consistency is kept uniform. The external surfaces of the buildings under reference including the R.C.C. Jalli, fins and the panels above and the panels above and below the window etc. shall be finished in different colours of approved shade. The contractor will make suitable samples at site for Departments approval before taking up the work in hand and they will be allowed to proceed with the work only after getting Departments approval for the same. The painting shall be laid on evenly and smoothly by means of crossing and laying off, the later in the direction of the grain in case of wood. The crossing and laying off consists of covering the area with paint, brushing the surface hard for the first time and then brushing alternately in opposite directions two or three time and then finally brushing lightly in direction at right angles to the same. In this process, no brush marks shall be left after the laying off is finished. The full process of crossing and laying will constitute one coat. Where so stipulated, the painting shall be done with spraying. Spray machine used may be

(a) a high pressure (small air aperture) type or

(b) a low pressure (large air gap) type,

depending on the nature and location of work to be carried out. Skilled and experienced workmen shall be employed for this class of work. Paints used shall be brought to the requisite consistency by adding a suitable thinner. Spraying should be done only when dry condition prevails. Each coat shall

be allowed to dry cut thoroughly and rubbed smooth before the next coat is applied. This should be facilitated by thorough ventilation.

Each coat except the last coat, shall be tightly rubbed down with sand paper or fine pumice stone and cleaned of dust before the next coat is laid. No left over paint shall be put back into the stock tins. When not in use, containers shall be kept properly closed. The final painted surface shall present a uniform appearance and no streaks, blisters, hair marks from the brush or clogging of paint puddles in the corners of panels, angles of moldings etc. shall be left on the work. In case of cement based paints / primers, the absorbent surfaces shall be evenly damped so as to give even suction. In any weather, freshly painted surfaces shall be kept damp for atleast two days. In painting doors and windows, the putty around the glass panes must also be painted, but care must be taken to see that no paint stains etc. are left on the glass. Tops of shutters and surfaces in similar hidden locations shall not be left out while painting. Prospect covers of electrical switch boxes have to be painted from inside by removing them. Care shall be taken while removing them in position after painting with respective approved paints. In painting steel work, special care shall be taken while painting over bolts, nuts, rivets, overlaps etc. The additional specifications for primer and other coats of paints shall be as in accordance to the detailed specifications under the respective headings. Any damage caused during painting work to the existing works / surfaces shall be made good by the contractor at his own cost.

**Brushes and Containers :**

After work, the brushes shall be completely cleaned off paint and linseed oil by rinsing with turpentine. A brush in which paint has dried up is ruined and shall be kept at a place free from dust. When the paint has been used, the containers shall be washed with turpentine and wiped dry with soft clean cloth, so that they are clean and can be used again.

**Measurement :**

Painting, unless otherwise stated shall be measured by area in square metre. Length and breadth shall be measured correct upto two places of decimal of a meter. No deduction shall be made for opening not exceeding 0.05 sqm. and no addition shall be made for painting to the beading, moulding edges, jambs, soffits, sills, architraves etc. of such openings. In measuring painting, varnishing, oiling etc. of joinery and steel work etc. the coefficient as in the following table shall be used to obtain the areas payable. The co-efficient shall be applied to the areas measured flat and not

girthed in all cases. In case of painting of door shutter with push plates in plastic laminate, deduction will be made for area of such laminations.

**Precautions :**

All furniture, lightings, fixture, sanitary, fittings, glazing, floors etc. shall be protected by covering and stains, smears, splashing, if any shall be removed and any damage done shall be made good by the contractor at his cost.

**Rates :**

Rates shall include cost of all labour and materials involved on all the operations described above and in the particular specifications given under the several items.

**Painting, Priming coat on Wood, Iron of Plastered Surfaces**

**Primer**

The primer for wood work, iron work or plastered surface shall be as specified in the description of the item. Primer for wood work / Iron & Steel / Plastered / Aluminium surfaces shall be as specified below:

Surfaces Primer to be used

- a) Wood work (hard and soft wood) Pink conforming to IS 3536 – 1966
- b) Resinous wood and ply wood Aluminium Primer
- c) Iron & Steel, aluminium and galvanized steel Work : Zinc chromate primer conforming to IS 104-1962
- d) d) Plastered surfaces, cement brick work, Asbestos surfaces for oil bound distemper and paint Cement primer The primer shall be ready mixed primer of approved brand and manufacture.

The wood work to be painted shall be dry and free from moisture. The surface shall be thoroughly cleaned. All unevenness shall be rubbed down smooth with sand paper and shall be well dusted. Knots, if any, shall be covered with preparation of red lead