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DEPARTMENT OF COMMERCE BUREAU OF STANDARDS WASHINGTON Letter
Circular
LC 81
(Supplement
to LC 54)

(October 10, 1922.)

SPECIFICATIONS FOR PASTE FOR USE ON RAILROAD TRACK SCALES.

In the prevention of the levers and structural steel parts of railroad track scales from corrosion, the practice of painting the thoroughly cleaned and dried surfaces with a good grade of red lead paint has been found satisfactory. A more complete discussion of the protection of track scales from corrosion is given in Letter Circular 54, Protection of Track Scale Parts from Corrosion.

I. FORMULAS FOR PAINT. The red lead paint to be used should be mixed in accordance with one of the following formulas:-

Formula No. 1.	(Bright red paint, mixed with dry red lead.)
Linseed oil Turpentine	
Formula No. 2.	(Bright red paint, mixed with red lead paste.)
Linseed oil Turpentine	ground in linseed oil 32 pounds 3-1/2 pints 1-1/2 gills 1-1/2 gills
Formula No. 5.	(Light brown paint, mixed with dry red lead and dry lamp black.)
Lamp black, dry Linseed oil Turpentine	
Formula No. 4.	(Light brown paint, mixed with red lead paste and lamp black paste.)
Lamp black paste Linseed oil Turpentine	ground in linseed oil 3 pounds e, ground in linseed oil 3 ounces 3-1/2 pints 2 gills 2 gills

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Formula No. 5. (Dark brown paint, mixed with dry red lead and dry lamp black.)

Red lead, dry	17	pounds
Lamp black, dry		
Linseed oil	5-	-3/4 pints
Turpentine	1	gill
Japan drier	3	gills

Formula No. 6. (Dark brown paint, mixed with red lead paste and lamp black paste.)

Red lead paste, ground in linseed oil	18 pounds
Lamp black paste, ground in linseed oil	
Linseed oil	
Turpentine	
Japan drier	3 gills

II. SPECIFICATIONS FOR MATERIALS.

- l. Red Lead. The red lead to be used in the formulas previously given should be pure red oxide of lead, free from adulterants; it should be of a good bright red color; it should contain at least 94% of true red lead (Pb₃O₄). When red lead paste ground in linseed oil is used, the paste should contain at least 92% of pigment and the pigment should contain at least 98% of true red lead (Pb₃O₄).
- 2. Lamp Black. When lamp black ground in linseed oil is used, the paste should contain about 35% by weight of lamp black.
- 3. Panel Test. The materials should be such that when the paint is mixed in accordance with the formulas given, and applied to a smooth surface, it must dry solidly without running or sagging.

III. APPLICATION OF COATS.

l. Three Coats of Red Lead. When three thin coats of red lead are used, as recommended in paragraph II-1 of Letter Circular 54, the following procedure is further recommended:——that the first coat consist of a bright red paint mixed in accordance with formulas No. 1 or No. 2; that the second coat consist of a light brown paint mixed in accordance with formulas No. 3 or No. 4; and that the third coat consist of either a bright red paint as specified in formulas No. 1 or No. 2, or a dark brown paint as specified in formulas No. 5 or No. 6. This procedure will be of assistance to the painter in covering all parts with the different coats, and it will also facilitate inspection.

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- 2. Prompt Application of Red Lead Paint. The red lead paint should not be mixed more than 24 hours before it is applied.
- 3. Two Coats of Red Lead and Two Top Coats. In case it is desired to have the finished surfaces of a light color, the last coat of red lead recommended in a preceding paragraph may be omitted and two top coats of the desired color be applied.
- It is recommended that such top coats when used consist of any good grade of white paint, such as a mixture of zinc oxide and either basic carbonate of white lead or basic sulphate white lead in a vehicle of linseed oil with just sufficient Japan drier added to cause the paint to harden in 48 hours. Satisfactory paints of this character for top coats can be purchased ready mixed.
- 4. Allowance for Drying of Coats. After each coat is dry to touch, it should be allowed to stand at least 3 days longer or preferably a week longer, before the succeeding coat is applied.





