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**PAKISTAN STANDARD SPECIFICATION**  
**FOR**  
**READY MIXED PAINT, BRUSHING,**  
**FINISHING, SEMI-GLOSS**  
**FOR GENERAL PURPOSE**



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**PAKISTAN STANDARDS AND QUALITY CONTROL AUTHORITY,**  
**STANDARDS DEVELOPMENT CENTRE,**

Plot No. ST-7A, Block-3, Scheme 36, Gulistan-e-Johar Karachi

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**0. FOREWORD**

- 0.1 This Pakistan standard was first published in 1964. Keeping in view the latest practice in this field, the technical committee after due consideration decided to revise and make it to meet the urgent needs of the country Industry.
- 0.2 While preparing this standard the views of producers, consumers and technologists have been taken into consideration and also the existing trade international practice in this field in the Country. Preparation of this standard assistance derive from other international Standards, are also acknowledged with thanks.
- 0.3 The final value observed or calculated expressing the result of a test or analysis shall be rounded off in accordance with PS.103:1960 Rules for Rounding off Numerical Values.
- 0.4 This standard is intended chiefly to cover the technical provisions relating to the supply of the material, and it does not include all the necessary provisions of a contract
- 0.5 Pakistan Standard: "Method of sampling and testing of paints, varnishes etc. (PS. 113:1960) is a necessary adjunct to this standard.
- 0.6 This standard requires reference to the following Pakistan Standards Specifications:-
- |     |     |   |
|-----|-----|---|
| PS. | 196 | Manufactured Red Oxides of Iron for Paints. |
| PS, | 196 | Natural Red Oxides of Iron for Paints.      |
| PS. | 196 | Zinc Chrome for Paints.                     |
| PS. | 196 | Turpentine for Paints.                      |
| PS. | 196 | White Spirit for Paints.                    |
| PS. | 196 | Liquid Driers.                              |
1. **SCOPE:** This standard prescribes the requirements and the methods of test for the material commercially known as ready mixed paint, brushing, finishing, semi-gloss, for general purpose. The material is used for the protection and decoration of wood and steel and is normally applied as a painting system over suitable priming paints.
2. **SAMPLE:**  
Prior to commencement of supply, the vendor shall submit for approval a sample of the paint consisting of two filled 1-Pint containers (for laboratory testing) and further sample consisting of one filled 1-gallon container (for testing on wagons). All samples shall be legibly marked with the vendor's product reference.

On approval, the sample will constitute the approved sample for a period not exceeding 12 months from the date of approval, Where a sample is tested and approved by the purchaser the results of such tests as will permit the veneer to meet the limits imposed the specification for deliveries shall be made available to the vendor on request.

### 3. TEST SAMPLES:

Samples of the paint and the containers in which it is supplied may be taken from any portion of consignment for testing in accordance with the provisions of the Specifications sampling shall be carried out in accordance with the PS. 113 Methods of sampling and testing of paints, varnishes, etc,"

### 4. SUPPLY:

Unless otherwise agreed by the purchaser, the paint supplied shall not differ significantly from the approved sample, in either composition or performance.

### 5. VENDOR'S CERTIFICATE:

5.1. Where required by the purchaser, the vendor shall certify that each batch of paint supplied has been manufactured to the sample formula as the approved sample.

5.2. Alternatively the purchaser may require a guarantee that the paint complies with this specification.

5.3. The following information shall be given on the certificate or guarantee.

- (a) Description of the material:
- (b) The vendor's product reference:
- (c) Batch identifications:
- (d) Quantity in each batch:
- (e) Date of manufacturing:
- (f) Use before (date):

### 6. REQUIREMENTS:

6.1 Composition;- The medium should consist of an oil modified alkyd resin having an oil length of not less than 55 % and not more than 70 %. In addition to this not more than 10 % (calculated by weight on non-volatile portion of the alkyd resin) of a suitable modifying resin or oleoresinous varnish may be incorporated.

**Note:-** This does not allow the incorporation of a resin either in the pure form or as a lime hardened material nor as an ester gum. However, the complex formed by the reaction of resin with a maleic Anhydride or Phenol Formaldehyde may be incorporated. Provided that its inclusion does not in any way deteriorate the properties of the finishing paint with reference to its exterior durability.

- 6.2 Pigments:- Choice of the pigments is left to the discretion of the manufacturer and the selection should be based according to the performance clauses of this specification.
- 6.3 Flash point.-The flash point of the material shall not be below 73 F.
- 6.4 Consistency.-The material shall be in such a condition that stirring easily produces a smooth uniform paint suitable for application by brushing or spraying as specified by the purchaser.
- 6.5 Viscosity:- 80-100 Secs in ford cup No.4 : When the original container of the laboratory sample container is examined the paint shall not show hard settling, objectionable skinning or tendency for the medium to gel.
- 6.6 Drying Time:-  
(a) Surface Dry Time: the paint film shall be surface, dry in not more than 4 hours from the time of application.  
(b) 'Hard Drying time: When tested by method number 8.4 the material shall be hard dry in not more than 16 hours from the time of application.
- 6.7 Colour:- When a panel prepared with a coat of suitable undercoat and of suitable finishing enamel is examined 24 hours after application, its colour shall be a close commercial match to that specified by the purchaser.
- 6.8 Gloss:- The paint shall dry with a full gloss when examined 24 hours after application.
- 6.9 Opacity :- When tested , the contrast ratio shall not be less than 75 % for an colours except BS colour numbers 536,537 and 538 of the 38IC series, in which case the contrast ratio shall not be less than 50 %.
- 6.10 Flexibility and Adhesion:-  
(a) When the paint film is tested at room temperature 7days after application by method number 10 of Pakistan Stadanrd CDC-56 using a ¼" mandrel it shall not show cracking or loss adhesion.  
(b) Note: Special Test: When this material is required for the painting of Railway coaches and wagons which are required to withstand extremely cold temperature, it is essential that the bend test be done after the panel has air dried for 4 days and then kept at 0°C for 5 'hours before bending. The operation of bending shall also be carried out at 0 C.
- 6.11 Resistance to white spirit and kerosene. When tested by method number 13 and 14 of PS56, 4 days after application paint film shall not show signs of softening or of removal.
- 6.12 Scratch resistance:- When the film applied on a tin plate is tested 7 days after application by method number 14 of DEF 1053 with a load of 750 grams. The metal shall not be visible through the scratch on the film.

- 6.13 Accelerated weathering.-When a steel panel is painted with a coat of approved Red Oxide Zinc Chromate Primer and one coat of an undercoat and one coat of Finishing paint is tested by method number 26 of DEF 1 053 for 1,000 hours. it shall not show signs of cracking or appreciable chalking or colour fading and shall give reasonable protection to the metal surface against corrosion, The test shall be carried out against and shall commence 7 days after application of the finishing coat.
- 6.14 Preparation of painted test panels:- For the purpose of clauses 6.6 to 6.13, test panels shall be prepared in accordance with the following weights of a single coat of paint film :-

Weight of the paint	Limits of Weight of dry film
lb/gall	Oz/sq.yd
Up to 12	0.85 – 1.15
Over 12	1.15 – 1.55
Over 14	1.65 – 2.1
Over 16	2.1 – 3.0

**NOTE:-** The paint film prepared on a burnished steel panel or a tin plate 6" x 4" (or larger) and allowed to dry for 24 hours shall be smooth glossy free from brush marks or orange peeling sagging and wrinkling and in no way inferior to a film prepared in a similar manner from the approved sample.