

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 101-1-2 (1987): Methods of sampling and test for paints, varnishes and related products, Part 1: Test on liquid paints (general and physical), Section 2: Preliminary examination and preparation of samples for testing [CHD 20: Paints, Varnishes and Related Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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*Indian Standard***METHODS OF SAMPLING AND TEST FOR  
PAINTS, VARNISHES AND RELATED PRODUCTS****PART 1 TESTS ON LIQUID PAINTS ( GENERAL AND PHYSICAL )****Section 2 Preliminary Examination and Preparation of Samples for Testing***( Third Revision )*

**1. Scope** — Prescribes the procedure for preliminary examination of a single sample as received for testing and procedure for preparing a test sample.

**2. Examination of Sample Container**

**2.1** Record any defects in the sample container or any visible leakage. If the contents have been affected, the sample shall be rejected.

**2.2** Remove all packing material ( for example, sawdust ) and other debris from the outer surface of the container, particularly around the closure, open the container carefully, taking care not to disturb the contents.

**2.2.1** Some paints and related products are prone to develop gas or vapour pressure during storage. Care, appropriate to the situation, should be taken in opening containers, particularly if bulging of the lid or the bottom of the container is observed. If such phenomenon occurs, it shall be noted in this report.

**3. Preliminary Examination of Fluid Products****3.1 Visual Examination of Fluid Products**

**3.1.1 Ullage** — Record the approximate ullage, expressed as percentage of the total capacity of the container.

**3.1.2 Surface skin** — Record the presence of any surface skin, and its type ( whether continuous, hard or soft, thin or moderate or excessively thick ). If any skin is present, detach it as completely as possible from the sides of the container and remove it, if necessary, by sieving. Record the ease of removal. For analytical control purposes, where skin is present, it may be necessary to disperse the skin and include it in the sample for testing.

**3.1.3 Consistency** — Record whether the sample is thixotropic or whether gelling has taken place, taking care not to confuse gelling and thixotropy.

**Note** — Both thixotropic and gelled paints have a jelly like consistency, but whereas the consistency of the former is markedly reduced by stirring or shaking, the consistency of a gelled paint or varnish can not be reduced in this way.

**3.1.4 Separation of phases** — Record any separation of the sample into layers.

**3.1.5 Visible impurities** — Record any visible impurities present and remove them, if possible.

**3.1.6 Sediment** — If there is any appreciable sediment, record its presence and appearance.

**3.1.6.1** If there is any settling, record the type of settling like soft, hard or hard dry. If the settling is hard and appears dry and crumbly inside a lump when cut with a clean palette knife, describe it as hard dry.

**3.1.7 Clarity** — In the case of varnishes, thinners, catalysts, solutions, etc, record the clarity and colour of the sample.

**3.1.8 Mixing**

**3.1.8.1** Thoroughly stir the sample and incorporate any slight sediment. Samples which have gelled or show hard-dry settling can not be effectively reincorporated and shall, therefore, not be used for testing purposes. Care shall be taken to ensure minimum loss of solvent. To achieve this, all operations shall be carried out as quick as practicable.

**3.1.8.2** If the original sample contained skin, remove any remnants by straining the sample through a 150-micron IS Sieve [ see IS: 460 ( Part 1 )-1978 Wire cloth test sieves ( second revision ) ].

**3.1.8.3** If no hard settling has occurred, mix the sample thoroughly by a palette knife if the sample is small or by a stouter stirrer, if it is a larger sample. Firmly replace the lid and thoroughly shake the contents; inverting the container as this is being done. Repeat alternate stirring and shaking until the contents are completely homogeneous. Avoid, as far as possible, entrainment of air.

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**3.1.8.4** If hard settling has occurred, pour all the fluid medium into a clean container. Remove the settled pigment from the bottom of the container with a palette knife and mix thoroughly. When a uniform consistency has been achieved, return the medium to the original container, a small portion at a time, carefully incorporating each addition before the next is made. Complete the reincorporation by pouring from one container to the other several times. The sample shall be free from air bubbles before use.

#### **4. Preliminary Examination for Viscous Products, such as Putties Mastics, etc**

**4.1** Examine these products in general as in 3. Where mixing is necessary to ensure homogeneity, a small heavy duty mixer may be used.

#### **5. Preliminary Examination for Products in Powder Form**

**5.1** No special procedure is usually required for these products, but unusual features shall be recorded, such as abnormal colour, presence of lumps, foreign matter, etc.

#### **6. Blending and Reduction of a Series of Samples**

**6.1** In case where a series of samples have been taken from a homogeneous product, they may either be tested separately or combined to produce a composite (reduced) sample as given in 6.1.1 to 6.1.3.

**6.1.1 Fluid products** — After thoroughly mixing each sample as given in 3, pour or otherwise transfer the samples into a clean, dry container of suitable size and thoroughly mix them by stirring, shaking, etc. When mixed sample appears to be homogeneous, take a reduced sample in accordance with IS:101 ( Part 1/Sec 1)-1985 'Methods of sampling and test for paints and related products: Part 1 Tests on liquid paint (general and physical)', Section 1 Sampling (*third revision*)'. Place the reduced sample in one or more clean, dry containers allowing 5 percent ullage, then close, label and, if necessary, seal the containers.

**6.1.2 Viscous products** — It is not possible to specify any single, generally applicable procedure. Treat each case on its merits, taking into account the mechanical aids available, the difficulty of mixing viscous materials, the possible loss of volatile matter, etc.

**6.1.3 Products in powder form** — Empty the contents of the various sample containers into a clean, dry container of suitable size and mix thoroughly. Reduce the sample down to a suitable size by quartering either manually or by means of a rotary samples divider, then place the reduced sample in one or more clean, dry containers. Close, label and, if necessary, seal the containers.

#### **7. Labelling**

**7.1** The following information shall be given on the label of the sample container:

- a) Name of the material;
- b) Name of manufacturer;
- c) Date of manufacture;
- d) Size and particulars of the consignment;
- e) Name of the consigner; and
- f) Details of sampling like sample size, place, date and name of sampler.

#### **8. Report**

**8.1** The report shall contain the following:

- a) description of the sample
- b) appearance, clarity, etc;
- c) description of skinning observed and the sieving procedure adopted;
- d) description of settling observed, and the mixing and incorporation procedure followed; and
- e) other observations as indicated in this standard.

### **EXPLANATORY NOTE**

This Indian Standard is one of a series of standards dealing with sampling and testing of paints, varnishes and related products. This standard supersedes 4 of IS:101-1964 'Methods of test for ready mixed paints and enamels (*second revision*)'. Considerable assistance has been derived from ISO 1513-1980 'Paints and varnishes — Examination and preparation of samples for testing', issued by the International Organization for Standardization (ISO).