INTERNATIONAL STANDARD

ISO 8130-9

First edition
1992-12-15

Coating powders —

Part 9:
Sampling

Poudres pour revêtement —

Partie 9: Échantillonnage

Reference number
ISO 8130-9:1992(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 8130-9 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Sub-Committee SC 9, *General test methods for paints and varnishes*.

ISO 8130 consists of the following parts, under the general title *Coating powders*:

- *Part 1: Determination of particle size distribution by sieving*
- *Part 2: Determination of density by gas comparison pyknometer (referee method)*
- *Part 3: Determination of density by liquid displacement pyknometer*
- *Part 4: Calculation of lower explosion limit*
- *Part 5: Determination of flow properties of a powder/air mixture*
- *Part 6: Determination of gel time of thermosetting coating powders at a given temperature*
- *Part 7: Determination of loss of mass on stoving*
- *Part 8: Assessment of the storage stability of thermosetting powders*

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Case Postale 56 • CH-1211 Genève 20 • Switzerland
Printed in Switzerland

— *Part 9: Sampling*

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Coating powders —

Part 9:
Sampling

1 Scope

This part of ISO 8130 describes methods for the sampling of coating powders from consignments and for the subdivision of the sample into quantities suitable for undertaking appropriate test methods specified in the other parts of ISO 8130.

It is assumed that this part of ISO 8130 will be used and applied by those who are appropriately qualified and experienced. The procedures are intended to be carried out by suitably trained and/or supervised personnel.

2 Definitions

For the purposes of this part of ISO 8130, the following definitions apply.

2.1 lot (batch): A definite quantity of coating powder manufactured or produced under conditions presumed to be uniform.

2.2 consignment: A definite quantity of coating powder issued and received as one delivery and covered by one set of documents. The consignment may consist of one or more lots or parts of lots.

3 Apparatus

3.1 Sampling scoop, of non-sparking metal and of semicircular or C-shaped cross-section (see figure 1), capable of boring out a core of material from the full depth of the container.

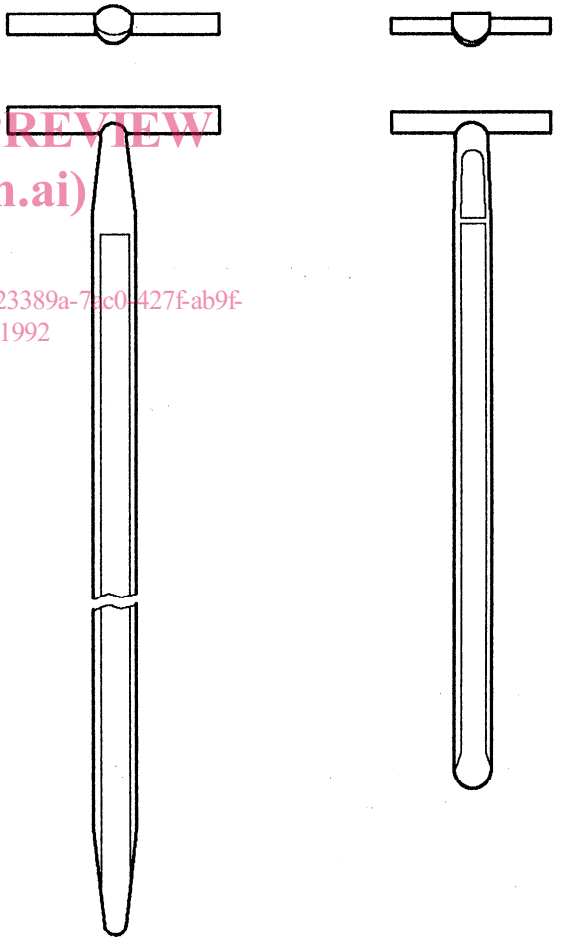

Figure 1 — Typical sampling scoops

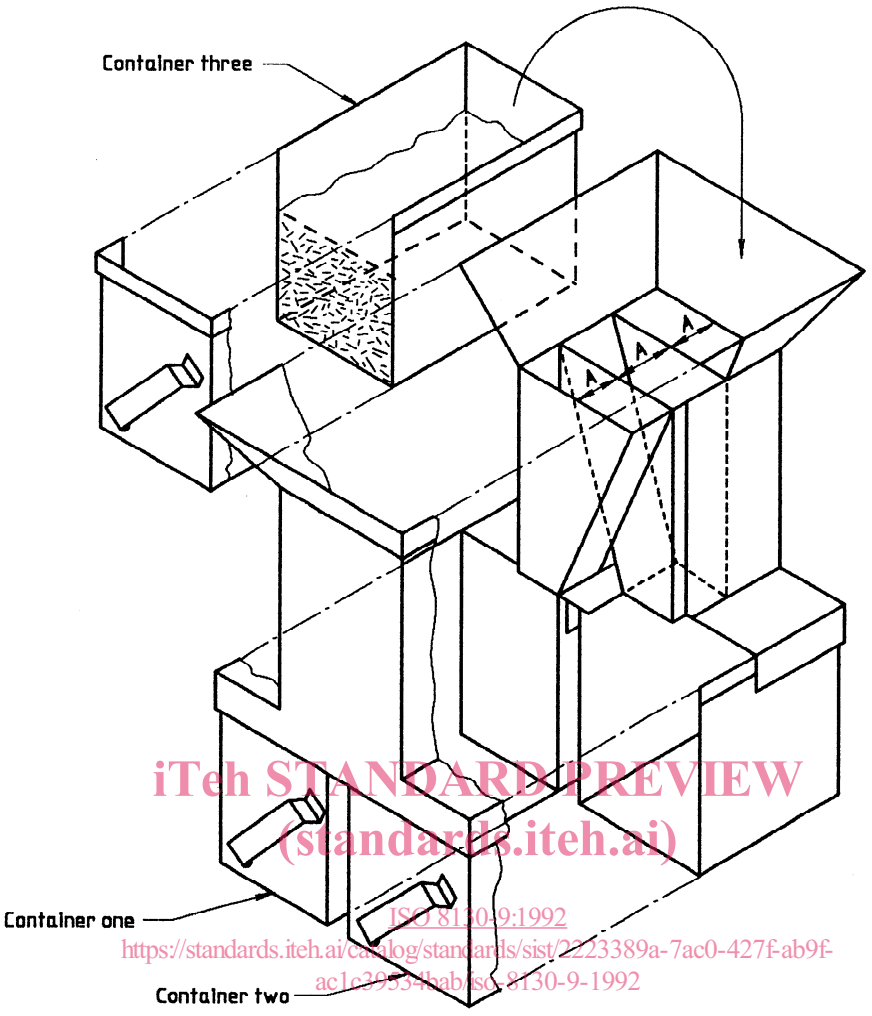

Figure 2 — Chute riffler type sampler divider

3.2 Chute riffler type sample divider (see figure 2).

3.3 Whole-stream rotary sample divider (see figure 3), consisting of a vibratory horizontal metal trough that conveys powder into a succession of receivers held in a rotating head, so that the receivers are presented sequentially to the discharge end of the trough.

3.4 Sample containers, of glass or other suitable material, each with a large mouth and capable of being securely closed without contaminating the sample.

4 Cleanliness safeguards

Special care is necessary to ensure that all sampling apparatus is clean and dry when used. Sampling shall be carried out in such a manner as to protect the samples, the material being sampled and the sampling instruments, as well as the containers in which the samples are placed, from accidental contamination by rain, dust, etc.

Material adhering to the outside of the sampling instrument shall be removed after each insertion and withdrawal. The inside parts of the sampling instrument shall be emptied and cleaned immediately after sampling.

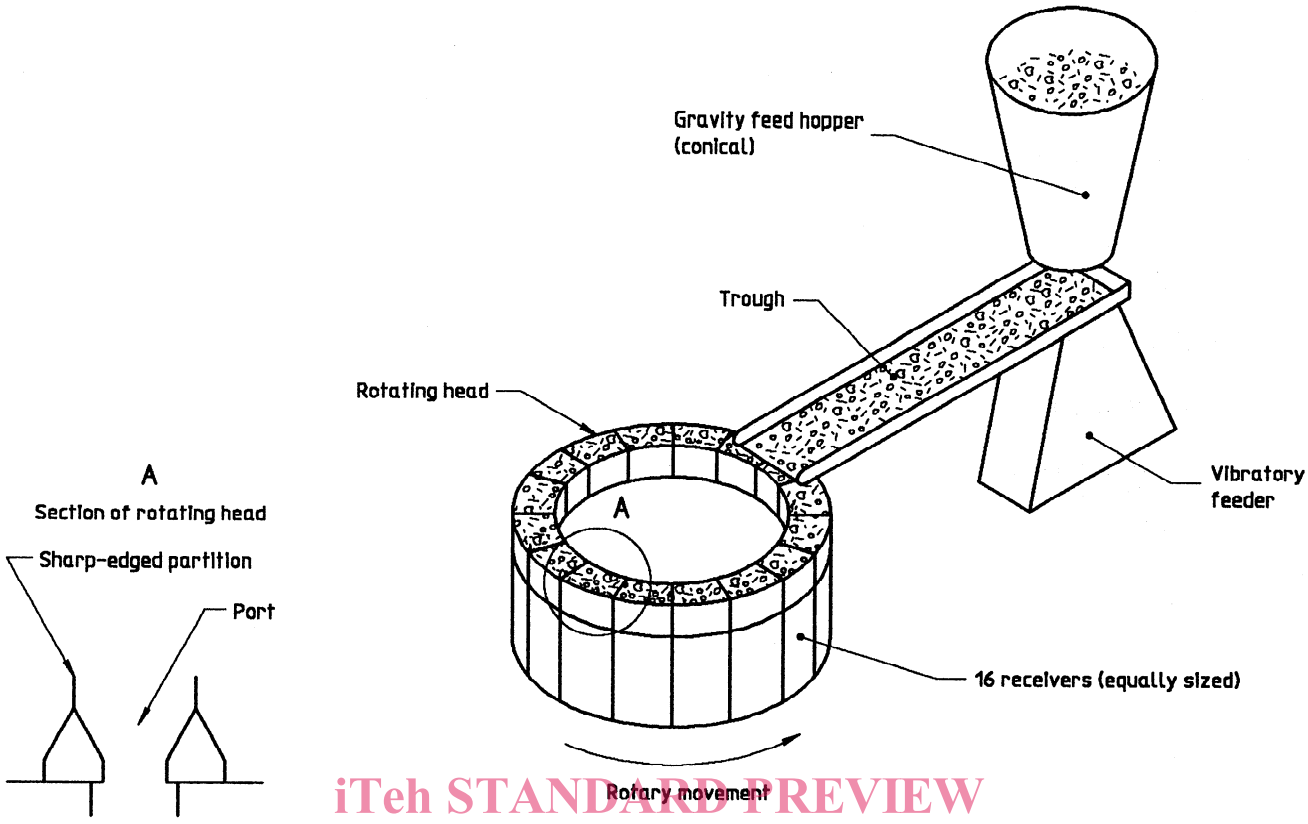

Figure 3 — Whole-stream rotary sample divider

Table 1 — Minimum number of containers to be taken from a lot

Total number of containers in the lot	Minimum number of containers to be sampled
1 to 2	all
3 to 8	2
9 to 25	3
26 to 100	5
101 to 500	8
501 to 1 000	13

5 Procedure

5.1 Sampling frequency from a lot

Take, at least, the number of containers from a lot at random as given in table 1.

If a series of samples has been taken, they may either be treated separately (see 5.2) or be combined to produce a composite sample (see 5.3).

5.2 Separate samples

Open each of the selected containers (5.1) and by means of the sampling scoop (3.1) draw out cores from each container so that a sample of not less than 2 kg is obtained. Transfer each sample to a separate clean sample container (3.4) and then tightly close the sample container. Label the container (see clause 6).

5.3 Composite sample

Open each of the selected containers (5.1) and by means of the sampling scoop (3.1) draw out cores of nominally equal portions from each and transfer the portions to a clean sample container (3.4). Obtain a total quantity of not less than 2 kg. After combining and mixing the samples, ensure that the sample container is closed tightly. Label the container (see clause 6).

5.4 Subdivision of the sample(s)

5.4.1 Sample retention

If more than one test sample is required, retain the discarded sample portions in 5.4.2 and 5.4.3 for redivision or as additional samples as appropriate.

The sample for subdivision by the rotary sample divider (3.3) may be of any convenient size above 20 g. If, however, the apparatus will accommodate all the sample obtained, it is permissible to omit the procedure given in 5.4.2.

5.4.2 Subdivision to give a test sample of mass greater than 20 g

Carry out the following procedure using the chute riffler type sample divider (3.2) in an enclosed space free from draughts to ensure that no fine particles are lost.

Place the sample (5.2 or 5.3) in the third container of the sample divider and level its surface. Raise the container and hold it so that its edge aligns with the top of the riffler. Slowly tilt the container so that the powder flows in a uniform stream into all the compartments and hence into the lower two containers, one half of the sample being collected in each of the latter. Set aside the material in one container and discard the material in the other. Repeat the procedure until the requisite quantity of test sample is obtained. Place this test sample in a clean sample container (3.4) and label (see clause 6).

5.4.3 Subdivision to give a test sample of mass less than 20 g

Carry out the following procedure using the rotary sample divider (3.3) in an enclosed space free from draughts to ensure that no fine particles are lost.

Switch on the sample divider to allow the receivers to pass sequentially under the discharge chute of the vibrating trough. Take the sample obtained in 5.4.2, if this is to be further divided, or the original sample (5.2 or 5.3) (see 5.4.1, second paragraph) and place it carefully in the hopper. Adjust the rate of flow of the sample from the hopper and the speed of rotation of the head to ensure that at least 30 revolutions are completed during the period of flow of the powder.

After all the sample has passed through the hopper and along the trough, remove four receivers from quadrant positions in the rotating head and place the collected powder in a fresh sample container (3.4). Discard the material in the remaining receivers.

Repeat the subdivision procedure with the fraction collected in the four receivers until the required mass of sample is obtained. Place this sample in a fresh container (3.4) and label (see clause 6).

6 Labelling

The container holding the test sample (5.4.2 or 5.4.3) shall be immediately labelled legibly and indelibly with the following information:

a) all details necessary to identify the material;

b) a reference to this part of ISO 8130 (ISO 8130-9);

c) the size and details of the lots and/or consignment as appropriate;

d) the designation and reference number of the sample;

e) the consignor;

f) the place of sampling;

g) the name of the operator;

h) any deviation from the sampling procedure specified;

i) the date of sampling.

Separate samples (5.2) and composite samples (5.3) shall be similarly labelled, if they are to be kept or transported before subdivision.

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