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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 90

HERMETICALLY SEALED METAL FOOD CONTAINERS

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 90, *Hermetically Sealed Metal Food Containers*, was prepared by Technical Committee ISO/TC 52, *Hermetically Sealed Metal Food Containers*, the Secretariat of which is held by the British Standards Institution, (B.S.I.).

The first Draft ISO Recommendation proposed by the Technical Committee was submitted to all the ISO Member Bodies, in March 1952, but part of it proved to be unacceptable and re-consideration was necessary.

On 15 October 1957, a second Draft ISO Recommendation (No. 10) was distributed to all the ISO Member Bodies and approved, subject to some editorial amendments, by the following 21 (out of a total of 39) Member Bodies:

Austria	Israel	Portugal
Belgium	Italy	Spain
Burma	Japan	Sweden
Czechoslovakia	Netherlands	Switzerland
France	New Zealand	United Kingdom
Germany	Pakistan	U.S.S.R.
Hungary	Poland	Yugoslavia

One Member Body opposed the approval of the Draft: Australia.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in March 1959, to accept it as an ISO RECOMMENDATION.

HERMETICALLY SEALED METAL FOOD CONTAINERS

GENERAL DATA

This ISO Recommendation contains the following sections:

1. Determination of capacity,
2. Designation,
3. Marking,
4. Definitions,
5. Procedure for dimensional specification.

1. DETERMINATION OF CAPACITY

It is recommended that the following method be used internationally for determining the capacities of hermetically sealed metal containers:

- 1.1 The bottom is applied to the container by the usual seaming methods.
- 1.2 Two holes, 3 to 4 mm (approximately $\frac{1}{8}$ inch) in diameter and about 5 mm (approximately $\frac{1}{4}$ inch) apart, are drilled in the lid of the can as close as possible to the countersink, from the inside surface outwards. This component is then applied to the can by the usual seaming methods.
- 1.3 The empty container is weighed in grammes to the nearest 1 gramme.
- 1.4 It is then filled with water at a temperature of 20 °C from a narrow water jet through one of the holes, with the container inclined at an angle to the vertical so that the holes are as high as possible. When water first runs out of the second hole, complete filling is ensured by closing the holes with the fingers, gently shaking the can and completing the filling. Any surplus water on the outside of the can is removed with blotting paper.
- 1.5 The filled container is then weighed in grammes to the nearest 1 gramme.
- 1.6 The difference between the weighings plus 0.28 per cent represents the capacity of the container in millilitres.

Note. The density correction of 0.28 ml for each 100 ml of capacity is based essentially on the temperature of the water which is weighed in the can, but also allows for the buoyancy of the can and of the weights in air. It has been assumed that the specific gravity of the water-filled can is unity and that brass weights are used, but some departure from these conditions may be allowed without serious loss of accuracy.