

PERMEABILITY CUPS

VF2200, VF2201

DATASHEET

PRODUCT DESCRIPTION

Permeability cups for determining the water vapour transmission of paints, varnishes, coatings, coating systems and related products. The permeability cup consists of a cup, sealing ring and closing ring. The sealing ring is designed to prevent turning when closing the cover. The permeability cup is suitable for testing both self supporting coatings and non self supporting coatings. Water vapour transmission is of interest for high humidity conditions. The wet cup method is the reference method for determining water vapour transmission. If agreed upon otherwise, the dry cup method may be used.



BUSINESS

Coating laboratories, paint production

STANDARDS

ISO 7783 (replaces NF T30-018), ASTM D1653, ASTM E95

FEATURES

- Level indicator
- Wide closing ring
- Easy to use
- Non rotatable sealing ring
- Easy to clean



SCOPE OF SUPPLY

Permeability cup, consisting of :

- Cup
- Sealing ring
- Closing ring

ORDERING INFORMATION

VF2200 Permeability cup 10 cm²
VF2201 Permeability cup 25 cm²

SPECIFICATIONS

Article number :	VF2200	VF2201
Surface area :	10 cm ²	25 cm ²
Internal diameter :	35,7 mm	56,4 mm
External diameter :	65,8 mm	89,0 mm
Mass : (of empty cup)	Approx. 70 g	Approx. 94,2 g
Material :	Anodized aluminum	Anodized aluminum

USE

- 1 Prepare the film (coating material) to be tested, either in self supporting or non self supporting form.
 - a. Self supporting coating films can be created by using a non sticky substrate, for example silicone coated paper. The suitable non sticky substrate can vary per application.
 - b. The sample can be cut to the appropriate size by using the sealing ring as a cutting guide.
- 2 Fill the permeability cup with the specified volume or to the specified distance from the edge with the required liquid or for the dry cup method with dry desiccant.
- 3 Place the precut sample over the sealing ring and align it.
- 4 Place the sealing ring with the sample on the flange of the cup, so that the film is between the cup flange and the sealing ring. Make sure that the sealing ring is properly aligned to the pins on the outside of the flange.
- 5 Place the sealing ring and screw hand tight.
- 6 Weigh the assembly and record the mass in grams (M1) by means of a balance that is suitable to determine the change in mass of the test assembly. Balances with a resolution of 0,001g are most suitable.
- 7 Place the cup in a test environment as stated in the standard and leave it undisturbed for the period of time that is stated in the test protocol/standard.
- 8 Weigh the assembly and note the weight at regular intervals (M2), until the mass loss per hour is linear.
- 9 Calculate the water vapour transmission rate of the film in grams per square meter per day (g/(m²/d)). The required formula for the calculation depends on the used method : dry cup or wet cup.
- 10 In order to open and clean the cup after the test, the sealing ring can be released by using the openings on the side of the cup.
- 11 After testing always store the cleaned cup in a dry environment.

SPECIAL CARE

- Always clean the instrument after use with a suitable solvent.
- Never clean the instrument by mechanical means, such as a wire brush or abrasive paper. This may cause, like the use of aggressive cleaning agents, permanent damage.
- Check the instrument for defects regularly.

DISCLAIMER

The right of technical modifications is reserved.

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