

ISO 7783:2011-11 (E)

Paints and varnishes - Determination of water-vapour transmission properties - Cup method

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principle	3
5	Apparatus and materials	3
5.1	Substrate for non-self-supporting coatings	3
5.2	Test cup	3
5.3	Ammonium dihydrogen phosphate (NH ₄ H ₂ PO ₄) solution for wet-cup method	3
5.4	Desiccant for dry-cup method	3
5.5	Sealing material	4
5.6	Test enclosure	4
5.7	Balance	4
6	Preparation for the test	4
6.1	Sampling of coating material	4
6.2	Preparation of test pieces	4
6.3	Determination of the thickness of the coating	5
6.4	Preparation of the test assemblies	6
7	Procedure	6
8	Expression of results	7
8.1	Water-vapour transmission rate, W , of self-supporting coatings	7
8.2	Water-vapour transmission rate, W , of non-self-supporting coatings	7
8.3	Water-vapour diffusion-equivalent air layer thickness, d	9
8.4	Water-vapour resistance factor, R	9
9	Precision	10
9.1	Repeatability, (r)	10
9.2	Reproducibility, (R)	10
10	Test report	10
Annex A (informative)	Derivation of Equation (8) in Subclause 8.3 for the calculation of the water-vapour diffusion-equivalent air layer thickness, d	12
Annex B (normative)	Use of molten wax for sealing the test assembly	14
Bibliography		18