INTERNATIONAL STANDARD

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AMENDMENT 1
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Thermal insulation — Mass transfer — Physical quantities and definitions

AMENDMENT 1

Isolation thermique — Transfert de masse — Grandeurs physiques et définitions

AMENDEMENT 1

Reference number
ISO 9346:1987/Amd.1:1996(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.

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Thermal insulation — Mass transfer — Physical quantities and definitions

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Add the following terms and definitions to clause 3.

Physical quantities and definitions	Symbol	Unit
3.30 density of gas flow rate: Mass of gas passing through a material as a function of time and area of surface, under specified conditions. NOTES 1 For the case of gas transfer through a material bound by parallel surfaces this is often referred to as "gas transmission rate". 2 An alternative form of definition is in use where "amount of substance" replaces "mass" and with the corresponding units written in terms of the unit mol instead of kg.	M	kg/(m^2·s)
3.31 gas permeance: Mass of gas passing through a material as a function of time, area of surface and pressure difference. NOTE — An alternative form of definition is in use where "amount of substance" replaces "mass" and with the corresponding units written in terms of the unit mol instead of kg.	Q	kg/(m^2·s·Pa)
3.32 gas permeability: Product of the gas permeance and the perpendicular distance between the surfaces of the material under consideration. NOTES 1 This is only quantifiable for heterogeneous materials and systems. 2 An alternative form of definition is in use where "amount of substance" replaces "mass" and with the corresponding units written in terms of the unit mol instead of kg.	P	kg/(m·s·Pa)
3.33 gas diffusion coefficient: Rate of gas diffusion through a material. NOTES 1 See also 3.13. 2 An alternative form of definition is in use where "amount of substance" replaces "mass" and with the corresponding units written in terms of the unit mol instead of kg.	D	m^2/s
3.34 gas solubility: Mass of permeant gas as a function of mass of permeated material under a specified pressure of permeant. NOTE — An alternative form of definition is in use where "amount of substance" replaces "mass" and with the corresponding units written in terms of the unit mol instead of kg.	c	kg/kg

Physical quantities and definitions	Symbol	Unit
3.35 gas solubility coefficient: Gas solubility divided by the permeant pressure. NOTES 1 The relationship $S = c/p$ is Henry's Law, where c is a function of the permeant gas, the permeated material and temperature. 2 An alternative form of definition is in use where "amount of substance" replaces "mass" and with the corresponding units written in terms of the unit mol instead of kg.	S	Pa^{-1}
3.36 gas permeability coefficient: Product of the diffusion coefficient and the solubility coefficient. NOTE — An alternative form of definition is in use where "amount of substance" replaces "mass" and with the corresponding units written in terms of the unit mol instead of kg.	P_c	$m^2/(s \cdot Pa)$

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Descriptors: thermal insulation, mass transfer, quantities, units of measurement, symbols, definitions.

Price based on 2 pages