

# DIN EN 196-9:2010-07 (E)

## Methods of testing cement - Part 9: Heat of hydration - Semi-adiabatic method

---

<b>Contents</b>		<b>Page</b>
Foreword .....		3
1	Scope .....	4
2	Normative references .....	4
3	Principle .....	4
4	Apparatus .....	4
5	Determination of the heat of hydration .....	7
5.1	Laboratory .....	7
5.2	Procedure .....	8
5.2.1	Mortar composition .....	8
5.2.2	Mixing .....	8
5.2.3	Positioning of the test sample .....	8
5.3	Measurement of heating .....	8
6	Calculation of the heat of hydration .....	9
6.1	Principles of calculations .....	9
6.2	Calculation of the heat accumulated in the calorimeter .....	9
6.3	Calculation of heat lost into ambient atmosphere .....	10
6.4	Calculation of heat of hydration .....	11
7	Expression of results .....	11
7.1	Reporting of results .....	11
7.2	Precision .....	11
7.2.1	Repeatability .....	11
7.2.2	Reproducibility .....	11
Annex A (normative)	Calibration of the calorimeter .....	12
A.1	Principle .....	12
A.2	Apparatus and power supply .....	12
A.3	Calibration procedure .....	13
A.3.1	Determination of the coefficient of total heat loss, .....	13
A.3.2	Determination of the thermal capacity .....	15
Annex B (informative)	Worked example of determination of heat of hydration .....	17
B.1	General test conditions .....	17
B.2	Basic calculations .....	17
B.3	Determination of test results .....	17
Bibliography .....		20