

# DIN EN 15188:2021-07 (E)

## Determination of the spontaneous ignition behaviour of dust accumulations

---

<b>Contents</b>	<b>Page</b>
European foreword .....	3
Introduction .....	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions .....	5
4 Test apparatus .....	6
4.1 Sample baskets .....	6
4.2 Determination of Basket Volume .....	7
4.3 Oven and test conditions.....	7
4.4 Thermocouples.....	9
4.5 Temperature recording equipment.....	9
5 Preparation of dust samples.....	9
6 Procedure .....	10
6.1 Experimental Procedure .....	10
6.2 Evaluation of tests .....	11
6.3 Calibration of thermocouples.....	12
7 Test report.....	12
8 Precision .....	13
8.1 General.....	13
8.2 Uncertainty of extrapolation to larger volumes .....	13
8.3 Uncertainty of single-basket-test (10 cm basket).....	14
Annex A (normative) Theoretical Basis to Determinations and Extrapolations.....	15
Annex B (informative) Extrapolation of induction times .....	21
Annex C (informative) Extrapolation to Temperatures or Volumes of Interest by Numerical solution of Fourier's equation.....	23
Annex D (informative) Alternative method for running tests adiabatically and interpreting the results.....	26
Annex E (normative) Safety Precautions.....	30
Annex F (informative) Significant Changes between this European Standard and EN 15188:2007 .....	31
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2014/34/EU.....	33
Bibliography .....	34