



Designation: E 1623 – 03a4

An American National Standard

Standard Test Method for Determination of Fire and Thermal Parameters of Materials, Products, and Systems Using an Intermediate Scale Calorimeter (ICAL)¹

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1. Scope

1.1 This fire-test-response standard assesses the response of materials, products, and assemblies to controlled levels of radiant heat exposure with or without an external ignitor.

1.2 The fire-test-response characteristics determined by this test method include the ignitability, heat release rates, mass loss rates, visible smoke development, and gas release of materials, products, and assemblies under well ventilated conditions.

1.3 This test method is also suitable for determining many of the parameters or values needed as input for computer fire models. Examples of these values include effective heat of combustion, surface temperature, ignition temperature, and emissivity.

1.4 This test method is also intended to provide information about other fire parameters such as thermal conductivity, specific heat, radiative and convective heat transfer coefficients, flame radiation factor, air entrainment rates, flame temperatures, minimum

¹ This test method is under the jurisdiction of ASTM Committee E05 on Fire Standards and is the direct responsibility of Subcommittee E05.21 on Smoke and Combustion Products.

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