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Australian Standard 2484—1981

Fire

GLOSSARY OF TERMS RELATING TO FIRE TESTS



STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter



THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Board of Fire Commissioners, N.S.W.
CSIRO, Division of Building Research
CSIRO, Division of Protein Chemistry
Department of Housing and Construction
Department of Housing and Construction, N.S.W.
Department of Industrial Relations, N.S.W.
Health Commission of New South Wales
Insurance Council of Australia
Melbourne and Metropolitan Fire Brigade
Sydney County Council
Telecom Australia

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AUSTRALIAN STANDARD

GLOSSARY OF TERMS RELATING TO FIRE TESTS

AS 2484—1981

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PREFACE

This glossary was prepared by the Association's Committee on the Coordination of Fire Tests. During its preparation, reference was made to the following documents and where relevant they are referred to appropriately:

ISO Co-ordinating Committee on Fire Tests, Terminology	ISO/CCFT 4
Record Note of the Ad Hoc Meeting for Co-ordination of Terminology Concerning Fire Tests	ISO/CCFT 19
Fire Tests — Vocabulary	ISO 3261—1975
Glossary of Terms Relating to Plastics	AS 1886—1976
Combustion Propagation Characteristics of Plastics— Determination of Minimum Oxygen Concentration for Flame Propagation Following Top Surface Ignition of Vertically Oriented Specimens	AS 2122, Part 2—1978
Proposals of Committee B/3	B/3

In addition, various document of relevant ISO Technical Committees and particularly ISO/TC 38—Textiles, have also been referred to from time to time, but not specifically referenced herein.

The glossary also makes reference to terms which may be well known but are deprecated by the committee. In general, these terms are either considered to be misleading or meaningless, e.g. slow-burning and non-combustible, or have been superseded by another term, e.g. spontaneous ignition has been replaced by self-induced ignition.

A number of commonly used terms were considered by the committee, but were rejected as being unnecessary for inclusion in the glossary. The primary reasons in this regard are as follows:

- (a) The term is self-evident and does not need defining.
- (b) The dictionary meaning is sufficient.
- (c) The term represents a grammatical extension or alternative to an included term.
- (d) The term is not used in Australia.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

GLOSSARY OF TERMS RELATING TO FIRE TESTS

Term	Definition and source
after-flame	Persistence of flaming on a material, under specified test conditions, after the ignition source has been removed. (ISO/CCFT 4)
afterglow	Persistence of glowing of a material after cessation of flaming or after the ignition source has been removed. (ISO/CCFT 19)
ashes	Powdered mineral residues produced by complete combustion. (ISO/CCFT 4)
auto-ignition	Deprecated term. <i>See non-piloted ignition</i>
burn	To undergo combustion. (ISO/CCFT 4)
burned area	The area of a material that has been destroyed by combustion or pyrolysis, under specified test conditions excluding any area damaged only by shrinking (<i>cf</i> damaged area). (ISO/CCFT 19)
burning behaviour	All the physical and/or chemical changes that take place when materials, products or structures burn. (B/3)
calorific potential	The calorific energy which could be released by the complete combustion of unit mass of a material. (ISO/CCFT 4)
calorific value (actual)	The calorific energy which is released by the combustion of a unit mass of a material under specified fire test conditions. (ISO/CCFT 19)
char (N)	Carbonaceous residue resulting from pyrolysis or incomplete combustion. (ISO/CCFT 4)
clinker	A solid agglomerate of residues formed by either complete or incomplete combustion and which may result from partial or complete melting. (ISO/CCFT 4)
combustion	Exothermic reaction of a combustible substance with an oxidizer, accompanied by flames and/or glowing and/or emission of smoke. (ISO/CCFT 19)
damaged area	Total of the areas of a material permanently affected by thermal phenomena under specified test conditions: loss of material, shrinking, softening, melting, charring, combustion, pyrolysis, etc (<i>cf</i> burned area). (ISO/CCFT 19)
damaged length	The maximum extent, in a specified direction, of the damaged area of a material after combustion under specified test conditions. (ISO/CCFT 19)
deflagration	An explosion propagating at subsonic velocity. (ISO/CCFT 4)
detonation	An explosion propagating at supersonic velocity and characterized by a shock wave. (ISO/CCFT 4)
explosion	An abrupt oxidation or decomposition reaction producing an increase in temperature, in pressure or in both simultaneously. (ISO/CCFT 4)
ease of ignition	The ease with which a material can be ignited under specified test conditions. (ISO/CCFT 19) NOTE: It is currently and generally characterized by the minimum time of application of a heat source under specified conditions, but may also be measured in relation to temperature or test environment.
extent of combustion	<i>See damaged length</i> (ISO/CCFT 4)
fire	(a) A process of combustion characterized by the emission of heat accompanied by smoke and/or flame. (b) Combustion spreading uncontrolled in time and space. (ISO/CCFT 4)
fire behaviour of materials	All the physical and chemical changes that take place when materials or products are exposed to the action of fire. (This concept covers both reaction and resistance to fire). (ISO/CCFT 4)
fire hazard	The potential for— (a) a material, product or finished assembly to give rise to a fire when exposed to an ignition source; and (b) harm to life or damage to property, once a material, product or finished assembly is involved in fire. (B/3)
fire-proofing	<i>See fire retardance</i> NOTE: A descriptive term which implies that a product so treated will not burn. In fact it indicates that the material has been treated with an unspecified amount of fire retardant. (AS 1886—1976)
fire-resistance	The ability of an element of building construction, component or structure, to fulfil for a stated period of time the required stability, integrity, thermal insulation and/or other expected duty specified, in a standard fire-resistance test. (ISO/CCFT 19) NOTE: The use of this term is restricted to reference in association with AS 1530, Part 4—Fire-resistance Test of Structures.