Australian Standard®

Safety matches and containers—Safety requirements

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The following interests are represented on Committee FP/13:

Australian Consumers Association

Australian Fire Protection Association

Commonwealth Fire Board

Confederation of Australian Industry

Department of Industrial Relations and Employment, N.S.W.

Department of Public and Consumer Affairs, S.A.

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PREFACE

This Standard was prepared by the organization's Committee on Matches—Safety Requirements, at the request of the Victorian Country fire Authority and the Country Fire Services, South Australia. The two authorities were concerned that some matches available in the Australian market exhibited unsafe characteristics.

The Standard specifies performance requirements to eliminate the following potential hazards in book or wooden matches:

(a) Afterglow, which is a potential source of unwanted ignition and therefore of forest or other fires.

(b) Dropping and spitting of hot ash which can cause burns to the striker's skin or clothing.

(c) Flying heads which can fly into th striker's face or clothes.

(d) Delayed ignition which can also cause fire or injury to the striker because of the unexpectedness of the ignition.

(e) Container designs that provide an unintentional means of ignition during use.

(f) Containers likely to disgorge their contents during normal use.

For matches other than book matches there is also a test for splint strength. The test uses a striking method which has been deemed by some to be more subjective, depending on the striking force used by different testers, than a simple load test on the splint. Unfortunately it is the only method currently available which tests the likelihood of a match breaking, and takes into account not only splint strength but the striking force required to ignite the match.

Striking force is a marketing factor. A simple load test does not take into account the fact that a weak splint with a sensitive match head may not break in use whereas an insensitive match head with a strong splint may break. Use of the manual ignition procedure for tests of match burning properties is not considered a problem because these are tests of the chemical properties of match and striker and do not depend on striking force.

This Standard does not include requirements which do not relate to the safety of the product, e.g. the strength of the match container.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard

Safety matches and containers—Safety requirements

1 SCOPE. This Standard specifies safety performance and labelling requirements for safety matches which provide a source of ignition. The Standard applies to matches for domestic purposes, windproof and waterproof matches, and book matches.

2 REFERENCED DOCUMENTS. The following documents are referred to in this Standard:

AS
2400 SAA Packaging Code
2400.21 Part 21: Packaging of dangerous goods

Australian Code for the Transport of Dangerous Goods by Road and Rail

3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

3.1 Afterglow—visible signs of combustion in the match splint after a match has been struck and the flame extinguished.

NOTE: Signs of combustion (glowing) within the match head are not defined as afterglow.

3.2 Batch—a limited quantity of product which is made in one cycle of manufacture and is uniform with respect to starting material, composition, and method of manufacture.

3.3 Burning head separation—splint breakage after ignition which causes the burning portion of the match to be separated from the rest of the match.

3.4 Defective—a test specimen that fails in one or more respects to comply with the relevant requirements of the specification.

3.5 Dropping and spitting—dropping ignited particles which have the potential to cause burn marks on white paper.

3.6 Exploding head—an ignited fragment of a match head which discharges during ignition.

3.7 Friction surface—a surface specifically designed to cause ignition of a safety match when the two are rubbed together.

3.8 Hesitation—time interval between striking a match on its friction surface and flaring ignition of the match head.

3.9 Match container—a container which is in intimate contact with the matches.

NOTE: Individual match books are included in this definition.

3.10 Primary package—a package containing a number of match containers.

3.11 Safety match—a match which is designed so that it will not readily ignite unless brought into contact with a friction surface specifically designed to cause ignition.

3.12 Transport package—a package containing a number of primary packages.

4 SAMPLING FOR TYPE TESTING. Sufficient matches and match containers shall be selected from one batch to give a representative sample of the batch for type testing in accordance with Table 1 and Appendix A.

NOTE: The size of the sample will depend on the type of matches, the number of matches in each container, the order in which the tests are performed and the number of defects that occur during testing.

Taking as an example a traditional box of wooden matches with 50 matches to a box and assuming the maximum amount of concurrent testing with the maximum permissible number of defectives, the minimum sample size would be 20 boxes. The 20 boxes required for the drop ignition test would provide sufficient specimens for all the other tests, provided that they were not damaged during the drop test.

5 DESIGN REQUIREMENT. Match containers shall be designed so that a deliberate action, independent of the action of withdrawing a match from the container, is required to cause ignition.

6 PERFORMANCE REQUIREMENTS. Match containers and matches shall comply with the performance requirements given in Table 1.

7 MARKING.

7.1 Transport package. Transport packages shall be marked in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (see also AS 2400.21).

7.2 Primary package. The primary package shall be permanently and legibly marked with the registered name and address of the manufacturer, or, for imported matches, the registered name and address in Australia of the supplier.

7.3 Match container. The match container shall be permanently and legibly marked with—

(a) the registered trade name or trademark of the Australian manufacturer or Australian supplier;

(b) batch code linked to records of raw materials, manufacture and packaging; and

(c) the words ‘WARNING: KEEP OUT OF REACH OF CHILDREN’ in letters not less than 2 mm in height.

NOTE: Manufacturers making a statement of compliance with this Australian Standard on a product, or on packaging or promotional material related to that product, are advised to ensure that such compliance is capable of being verified.

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