

Fire-performance and antistatic requirements for conveyor belting



Contents

| | |
|---|----------|
| Technical Committee on Fire Resistant Conveyor Belting | 3 |
| Preface | 5 |
| 1 Scope | 6 |
| 2 Definitions | 7 |
| 3 Test requirements | 7 |
| 3.1 Classification of belting | 7 |
| 3.2 Types A1 and A2 belting | 7 |
| 3.2.1 Flame test — Types A1 and A2 belting | 7 |
| 3.2.2 Drum friction test | 7 |
| 3.2.3 Flame propagation test — Types A1 and A2 belting | 8 |
| 3.2.4 Electrical surface resistance test — Types A1 and A2 belting | 8 |
| 3.3 Types B1-A, B1-B, and B2 belting | 8 |
| 3.3.1 Flame test — Types B1-A, B1-B, and B2 belting | 8 |
| 3.3.2 Drum friction test | 8 |
| 3.3.3 Flame propagation test — Types B1-A, B1-B, and B2 belting | 9 |
| 3.3.4 Electrical surface resistance test — Types B1-A, B1-B, and B2 belting | 9 |
| 3.4 Type C belting | 9 |
| 3.4.1 Flame test | 9 |
| 3.4.2 Drum friction test | 9 |
| 3.4.3 Electrical surface resistance test | 9 |
| 4 Test methods | 9 |
| 4.1 Flame test for Types A1 and A2 belting | 9 |
| 4.1.1 Samples | 9 |
| 4.1.2 Equipment | 10 |
| 4.1.3 Procedure | 10 |
| 4.2 Flame test for Types B1-A, B1-B, B2, and C belting | 11 |
| 4.2.1 Samples | 11 |
| 4.2.2 Equipment | 11 |
| 4.2.3 Procedure | 12 |
| 4.3 Drum friction test for all types belting | 12 |
| 4.3.1 Samples | 12 |
| 4.3.2 Equipment | 12 |
| 4.3.3 Procedure | 13 |
| 4.4 Flame propagation test for Types A1, A2, B1-A, B1-B, and B2 belting | 14 |
| 4.4.1 Samples | 14 |
| 4.4.2 Equipment | 14 |
| 4.4.3 Procedure | 14 |
| 4.5 Electrical resistance test for all belting types | 15 |
| 4.5.1 Samples | 15 |
| 4.5.2 Equipment | 15 |
| 4.5.3 Preparation of sample | 16 |

4.5.4 Procedure 16

5 Branding 16

Annex A (informative) — Recommended installation measures 30

Annex B (informative) — Guideline for conformity assessment to CSA M422 31

CSA M422:14

Fire-performance and antistatic requirements for conveyor belting

1 Scope

1.1

This Standard specifies fire-performance and antistatic requirements for new (unused) conveyor belting for use in any part of a mining or excavation operation that is below the surface.

1.2

This Standard covers fire-performance and antistatic conveyor belting of the following types:

- a) Types A1 and A2 intended for use in explosive atmospheres; and
- b) Types B1-A, B1-B, B2, and C intended for use in non explosive atmospheres.

1.3

This Standard does not cover products of combustion or products of thermal degradation from conveyor belting subjected to fire or heating.

Note: While the intent of this Standard is to establish a reasonable level of fire-performance for conveyor belting, it is recognized that any conveyor belt material could burn under conditions different from those described in this Standard. Therefore, to ensure a higher level of fire safety, consideration should be given to installation measures such as those listed in Annex A.

1.4

A guideline for conformity assessment to this Standard is provided in Annex B.

1.5

In CSA standards, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required and “may” is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.