ISO 25947-5:2017-04 (E)

Fireworks - Categories 1, 2 and 3 - Part 5: Requirements for construction and performance

Contents

Page

Foreword v

1 Scope 1

2 Normative references 3

3 Termsanddefinitions 3

4 Construction 3
4.1 Construction materials (type test and batch test) 3
4.1.1 General requirements 3
4.1.2 Specific requirements 3
4.2 Length of handle (type test and batch test) 4
4.3 Permitted elements in batteries, batteries requiring external support, combinations and combinations requiring external support (type and batch test) 5
4.4 Dimensions for mini rockets (type test and batch test) 5
4.5 Specific requirements for compound firework (type and batch test) 5

5 Pyrotechnic composition (type test) 6

6 Means of ignition 8
6.1 Permitted means of ignition (type test and batch test) 8
6.2 Protection of initial fuse (type test and batch test) 10
6.3 Attachment of means of ignition (type test and batch test) 11
6.4 Fuse requirements (type test and batch test) 11
6.4.1 General requirements 11
6.4.2 Specific requirements 11

7 Performance 11
7.1 Properties to be checked before functioning tests 11
7.1.1 Loose pyrotechnic composition after mechanical conditioning (type test) 11
7.1.2 Integrity (type test and batch test) 12
7.1.3 Stabilisation of flight (type test and batch test) 12
7.1.4 Other requirements (type test) 12
7.2 Properties to be checked during functioning tests (type test and batch test) 13
7.2.1 Principal effects 13
7.2.2 Functioning 13
7.2.3 Angle of ascent or flight 13
7.2.4 Motion 13
7.2.5 Stability during functioning 13
7.2.6 Height of explosion 14
7.2.7 Sound pressure level 14
7.2.8 Explosions and other failures 14
7.2.9 Burning or incandescent matter 15
7.2.10 Extinguishing of flames 15
7.2.11 Projected debris 16
7.2.12 Burning rate of pyrotechnic composition 17
7.2.13 Pull-string or -strip 17
7.3 Properties to be checked after functioning tests (type test and batch test) 17
7.3.1 Droop 17
7.3.2 Plastics body 17

7.3.3 Rocket motor 17
7.3.4 Integrity after functioning 17

8 Primary pack or selection pack (type test and batch test) 18

9 Type testing 18
9.1 General 18
9.2 Number of items to be tested 19
9.3 Number of primary packs to be examined 19
9.4 Test report 20

10 Batch testing 20
10.1 General 20
10.2 Sampling plans 20
10.2.1 General sampling plans 20
10.2.2 Sample size for small batches 20
10.3 Unit of product 20
10.4 Nonconformities 21
10.5 Test report 22
10.6 Acceptance or rejection of a batch 22
10.6.1 Nonconforming units 22
10.6.2 Critical nonconforming units 22
10.6.3 Major nonconforming units 22
10.6.4 Minor nonconforming units 22
10.6.5 Fireworks supplied in primary packs or selection packs 23