DIN EN 15276-1:2019-06 (E)

Fixed firefighting systems - Condensed aerosol extinguishing systems - Part 1: Requirements and test methods for components

Contents

Page

European foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 6

4 Component requirements 8
4.1 Condensed aerosol generator 8
4.2 Solid aerosol forming compound 9
4.3 Cooling mechanism 9
4.4 Activation device 9
4.4.1 General 9
4.4.2 Electrical activation device 9
4.4.3 Thermal activation device 9
4.4.4 Other methods of activation device 9
4.5 End plate and housing 9
4.6 Extinguishants 9

5 Condensed aerosol generators requirements 9
5.1 General 9
5.2 Extinguishing density 10
5.3 Agent distribution 10
5.4 Discharge time 10
5.5 Ambient temperature and humidity operation ranges 10
5.6 Service life 10
5.7 Shelf life and storage conditions 10
5.8 Corrosion 10
5.9 Vibration 10
5.10 Mechanical Shock 10
5.11 Discharge temperature 11
5.11.1 General 11
5.11.2 Casing temperature 11
5.11.3 Aerosol flow temperature 11
5.12 Activation device 11
5.12.1 General 11
5.12.2 Electrical activation device 11
5.12.3 Thermal activation device 11
5.13 Function reliability 11
5.14 Open fire conditions 11
5.15 Accessories 11
5.16 Documentation 12

6 Marking 12

7 Test methods 13
7.1 Conditions 13
7.2 Samples 13

7.3 Compliance 14
7.4 Extinguishing density determination 14
7.5 Coverage determination 14
7.6 Temperature and humidity operation range tests 14
7.6.1 General 14
7.6.2 Test procedure 14
7.6.3 Low temperature Test 15
7.7 Accelerated ageing test 15
7.7.1 General 15
7.7.2 Objective of test 15
7.7.3 Performance requirements 15
7.7.4 Test 15
7.7.5 Remark 15
7.7.6 Number of product under test 15
7.7.7 Remark 15
7.8 Corrosion test 16
7.9 Stress corrosion test 16
7.10 Vibration test 16
7.11 Drop test 17
7.11.1 Impact Surface 17
7.11.2 Procedure 17
7.11.3 Requirements 17
7.12 Aerosol flow temperature test 17
7.13 Activation performance test 17
7.14 Function test 18
7.14.1 Discharge time 18
7.14.2 Aerosol flow temperatures 18
7.14.3 Test procedure 18
7.14.4 Casing temperature test 18
7.14.5 Efficiency 18
7.14.6 Requirements 19
7.15 Fire Exposure Test 19
7.15.1 Object of the test 19
7.15.2 Test procedure 19
7.15.3 Requirements 20

Annex A (normative) Extinguishing density/coverage test procedure 21

A.1 General 21
A.2 Principle 21
A.3 Extinguishing system 22
A.4 Extinguishing Density 23
A.5 Aerosol generator distribution verification tests 23
A.6 Extinguishing density tests 30
A.7 Hold Time Test of the determination of the maximum leakage area/volume ratio 47

Bibliography 50