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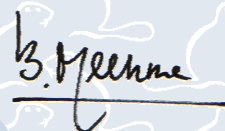
## DSPA Aerosol Generators

### STATEMENT BY KIWA

With this product certificate, issued in accordance with the Kiwa Regulations for Product Certification, Kiwa declares that legitimate confidence exists that the products supplied by

### DSPA B.V.

complying with the technical specifications as laid down in this product certificate and marked with the Kiwa®-mark in the manner as indicated in this product certificate, on delivery, may be relied upon to comply with Kiwa evaluation guideline BRL-KK23001/04 "the product certificate for fixed dry aerosol fire extinguishing components".



Bouke Meekma  
Kiwa

Publication of the certificate is allowed.

Advice: consult [www.kiwa.nl](http://www.kiwa.nl) in order to ensure that this certificate is still valid

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**Certification process**  
consists of initial and  
regular inspection of:

- quality system
- product

## DSPA Aerosol Generators

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### Generator specifications

The products mentioned below belong to this product certificate.

DSPA-8.1; DSPA-11.1, DSPA-11.2 , DSPA-11.3 , DSPA-11.4 , DSPA-11.5 and the DSPA-11.6.

Red steel containers.

### Application and use

These components for fixed fire extinguishing systems using dry aerosols are intended for incorporation into a fire extinguishing system. The fire extinguishing components are activated by the fire extinguishing system. These components comprise a container filled with a dry solid fire extinguishing agent which upon activation is discharged in the form of an aerosol to extinguish the fire. This arrangement of components is called the aerosol generator.

The fire extinguishing components shall be suitable for extinguishing fires of the following classes (EN 2):

- Class A (solid materials);
- Class B (liquid materials).

### Conditions for application

1. The numbers and of types of the extinguishing components have to be determined in conformity with the guidelines and calculation methods of the supplier.
2. An operation manual is to be included in the language of the country of delivery, known and authorised by Kiwa.
3. Distribution is to be done by supplier or companies authorised by the supplier.
4. Before usage an instruction is to be given by a trainer or instructor for this product authorized by the supplier.
5. The installation and maintenance of the fire extinguishing components have to take place according to the specifications of the supplier and evaluation guideline BRL-K23003

### Point of interest during use

Condensed aerosol extinguishing components are not allowed to be used for fires with below mentioned materials, unless tests of accredited testing laboratories demonstrate its function.

- Deep seated fires in Class A materials (EN2)
- Certain chemicals or mixtures of chemicals material, such as cellulose nitrate and gunpowder, that are capable of rapid oxidation in the absence of air
- Reactive metals such as lithium, sodium, potassium, magnesium, titanium, zirconium, uranium and plutonium.
- Metal hydrides
- Chemicals capable of undergoing auto thermal decomposition, such as certain organic peroxides and hydrazine
- Fire Class D (EN2)
- The outlet opening of the extinguishing components should not be installed near objects sensitive for high temperatures.

### Manual

At delivery the product should be accompanied by an operation manual in the language of the country delivered. Following minimum items has to be described:

- Preparations to be made before application;
- How to carry out application and under which circumstances;
- Field of application, extinguishing performance, ejecting length with temperature degradation index, surface temperature at extinguishing;
- How to handle the resources;
- What kind of quality control should be carried out during application;
- Chemic resistance of the extinguishing component;
- During processing and use the extinguishing compounds have to be safe for humans and environment. For the user this is proved with a safety information sheet for chemical products according to NEN-ISO 11014-1 (see also EU-guideline 91/155/EEG).

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### Marking

The Kiwa<sup>®</sup>-mark products are marked with the word mark KIWA. Place of the mark: on the Generator



Compulsory specifications:

Name Manufacturer  
Supplier's type designation  
Reference to the application instructions\*  
Certification mark  
Year and month of manufacturing and batch number  
Fire Class according EN2.

Method of marking:

- Non-erasable;
- Visible after assembly.

### RECOMMENDATIONS FOR CUSTOMERS

Check at the time of delivery whether:

- the supplier has delivered in accordance with the agreement;
- the mark and the marking method are correct;
- the products show no visible defects as a result of transport etc.

If you should reject a product on the basis of the above, please contact:

- DSPA B.V.
- and, if necessary,
- Kiwa Nederland B.V.

Consult the producer's processing guidelines for the proper storage and transport methods.

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### Product performance

#### Extinguishing factor, EN2, Class A and B, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	D.5.1, D.5.2, D.6.2, D.6.3,	50.3, 50.4, 49.3, 49.2.3,	-
Covers	-	-	-	-
Partly including	5.2	-	-	2.2, 2.3

- Wood crib test and Class A compatible wood crib test are not included
- See table 1 under "Product specifications".

#### Agent distribution, EN2, Class B, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	5.3	D.5.1, D.5.2	50.3, 50.4	-
Covers	-	-	-	-
Partly including	-	-	-	2.2, 2.3

- See table 3 under "Product specifications".

#### Discharge time and Temperature test, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	-	-	-
Covers	-	C.16.1, C.16.2, C.16.3	22	-
Partly including	5.4, 5.11 & 5.13	-	21.3	2.11, 2.4

- Type 8-1, only CEN/TR15276 regarding discharge time
- Discharged mass is not included
- See table 2 and 4 under "Product specifications".

#### Temperature and humidity, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	C.7.3	28, 32 & 33	-
Covers	-	-	-	-
Partly including	5.5	-	21.2	2.5

- See table 5 under "Product specifications".

#### Service life, based on:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	-	55	-
Covers	5.6	C.7.3	-	-
Partly including	-	-	-	2.6

- Service life is 15 years based on UL; Aging test 116 days at 90°C

#### Corrosion, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	5.8	C.9 & C.10	29, 30 & 31	-
Covers	-	-	54	-
Partly including	-	-	-	2.8

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Vibration, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	5.9	-	-	-
Covers	-	C.11	25	-
Partly including	-	-	-	2.9

- Type 8-1, only successful on 0.5G

Mechanical shock, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	5.10	C12 & C13	-	2.10
Covers	-	-	24	-
Partly including	-	-	-	-

Activator device, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	-	48	-
Covers	5.12	C.15	-	2.12
Partly including	-	-	-	-

Rigidity and activation of the solid aerosol compound, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	-	-	2.15
Covers	-	-	-	-
Partly including	-	-	-	-

- Test method 2 and 3, successful

Fixing system of the fire extinguishing component as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	-	23	-
Covers	-	-	-	2.17
Partly including	-	-	-	-

Auto activation of the solid aerosol compound, as tested:

	CEN/TR15276	NEN-ISO 15779	UL-2775	BRL-K23001
Equals	-	-	-	2.16
Covers	-	-	-	-
Partly including	-	-	-	-

- Test method 1, solid aerosol compound self activation at 370°C.
- Test method 2, solid aerosol compound self activation at 354°C.

Optional tests (with requirements):

- Open fire conditions according to CEN/TR15276-1 § 5.14.
- EN2, Class B, large liquid fires is according to evaluation guideline BRL-K23001/04 § 2.18
- EN2, Class C, fires gas is according to evaluation guideline BRL-K23001/04 § 2.19
- EN2, Class F, fires fat is according to evaluation guideline BRL-K23001/04 § 2.20
- Test of the determination of the maximum leakage area/volume ratio according to NEN-ISO 15779 § D.7
- Aerosol generator explosive atmosphere test and Pyrotechnic reaction containment test according to UL 2775 § 26 and CEN/TR 15276 § 7.18

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### Product specifications

**Table 1**

Extinguishing factor A and B;

Fire Class	Listing	According CEN/TR 15276	According UL 2775	According ISO 15779	Preburn time in seconds	Soak period in seconds	Test room in m3	Density in grams
EN2	Material / fuel							
A	Polymethylmethacrylate	A.6.3	49.2.3	D.6.3	210	600	112.12	96.6
A	Polypropylene	A.6.3	49.2.3	D.6.3	210	600	112.12	58
A	ABS	A.6.3	49.2.3	D.6.3	210	600	112.12	87
A	Reformed wood (chops)	A.6.4	-	-	360	600	112.12	29
A	MDF	A.6.4	-	-	360	600	112.12	59
A	Multilayers plywood	A.6.4	-	-	360	600	112.12	87
B	Heptane	A.6.2	49.3	D.6.2	30	30	112.12	33.5

**Table 2**

Type	Efficiency in %
DSPA-8.1	100
DSPA-11.1	100
DSPA-11.2	88 - 100
DSPA-11.3	90 - 100
DSPA-11.4	100
DSPA-11.5	94 - 100
DSPA-11.6	85 - 100

**Table 3**

Type	Agent distribution according CEN/TR 15276, UL 2775, NEN-ISO 15779 and BRL-K23001		
	Minimum height tested in Meter	Maximum height in Meter	Maximum area coverage in Meter
DSPA-8.1	2.44	4.88	9.76 x 3.66
DSPA-11.1	0.5	1.83	3.66 x 1.22
DSPA-11.2	0.5	2.44	3.66 x 2.44
DSPA-11.3	0.5	2.44	3.66 x 2.44
DSPA-11.4	1.22	3.05	3.66 x 3.66
DSPA-11.5	1.22	3.66	4.88 x 3.66
DSPA-11.6	1.22	3.66	7.32 x 3.66

**Table 4**

Type	Discharge time In Sec
DSPA-11.1	6 - 10
DSPA-11.2	9 - 15
DSPA-11.3	14 - 26
DSPA-11.4	19 - 31
DSPA-11.5	40 - 60
DSPA-11.6	30 - 50

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Table 5

Type	Distance in m		
	75°C	200°C	400°C
DSPA-8.1	1.5	0.35	0.15
DSPA-11.1	0.5	0.15	0.05
DSPA-11.2	0.5	0.15	0.05
DSPA-11.3	0.5	0.15	0.05
DSPA-11.4	1.0	0.25	0.15
DSPA-11.5	1.0	0.25	0.15
DSPA-11.6	1.0	0.35	0.15