



Product Certificate K21774/19 UK



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Valid until *Indefinite*
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FirePro

Non-Pressurized Condensed Aerosol Generators and Components

STATEMENT BY KIWA

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

FirePro Systems Ltd.

are 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 certification scheme BRL-K23001/04 "the product certificate for fixed dry aerosol fire extinguishing components".

Kiwa Nederland B.V. gives the certification trademark in license to FirePro for the production performed under certificate. Users of the products can check the status of a valid certificate on www.kiwafss.nl

This certificate remains the property of Kiwa Nederland B.V. The validity of the accreditation can be verified at the accreditation body (www.rva.nl)

Ronald Karel
Kiwa

Publication of the certificate is allowed. This certificate consists of 6 pages. Publication of only this front page or parts of the certificate is considered as "not valid".

Further information on the scope of this certificate and on the applicable certification scheme can be obtained from the certified body.

CERTIFICATE

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Certification process
consists of initial and
regular assessment of:

- quality system
- product

FirePro Non-Pressurized Condensed Aerosol Generators and Components

Certificate

This product certificate by Kiwa is based on the guideline BRL-K23001/04.

Generator specifications

The products mentioned below belong to this product declaration.

Type	Housing Stainless steel	Activation Type		Number of outlets
		Thermal	Electrical	
FP20SE	Cylinder	No	Yes	2
FP20T	Cylinder	No	Yes	1
FP20TH	Cylinder	Yes	No	1
FP40S	Cylinder	No	Yes	2
FP40T	Cylinder	Yes	Yes	1
FP80S	Cylinder	No	Yes	2
FP80T	Cylinder	Yes	Yes	1
FP100S	Cylinder	Yes	Yes	1
FP200S	Cylinder	Yes	Yes	1
FP500S	Cylinder	Yes	Yes	1
Type	Housing Red Coated Steel	Activation Type		Number of outlets
		Thermal	Electrical	
FP1200	Box	No	Yes	1
FP1200 T	Box	Yes	Yes	1
FP2000	Box	No	Yes	1
FP2000 T	Box	Yes	Yes	1
FP3000	Box	No	Yes	1
FP3000 T	Box	Yes	Yes	1
FP4200 T	Box	Yes	Yes	1
FP5700	Box	No	Yes	1
FP5700 T	Box	Yes	Yes	1
Type	Housing Stainless Steel	Activation Type		Number of outlets
		Thermal	Electrical	
FP1200 S	Box	No	Yes	1
FP1200 TS	Box	Yes	Yes	1
FP2000 S	Box	No	Yes	1
FP2000 TS	Box	Yes	Yes	1
FP3000 S	Box	No	Yes	1
FP3000 TS	Box	Yes	Yes	1
FP4200 TS	Box	Yes	Yes	1
FP5700 S	Box	No	Yes	1
FP5700 TS	Box	Yes	Yes	1

Non-pressurized generator.

FirePro Non-Pressurized Condensed Aerosol Generators and Components

Application and use

Total flooding fire-extinguishing systems are used primarily for protection against hazards that are in enclosures or equipment that, in itself, includes an enclosure to contain the extinguishant. Condensed aerosol generators can be used as a part of fire fighting systems in buildings, plants or other structures. It covers total flooding systems primarily related to buildings, plant and other specific applications, utilizing electrically non-conducting condensed aerosol fire extinguishants.

The following are typical of such hazards, but the list is not exhaustive:

- a) Electrical and electronic hazards;
- b) Telecommunications facilities;
- c) Flammable and combustible liquids and gases;

Where aerosol generators are used in a potentially explosive application, the suitability of the generator to the atmosphere for the determined life shall be assessed.

The fire extinguishing components shall be suitable for extinguishing fires of the following classes:

- Class A according EN2
- Class B according EN2

Conditions for application

- The numbers and types of the extinguishing components have to be determined in conformity with the guidelines and calculation methods of the supplier.
- Distribution is to be done by supplier or companies authorised by the supplier.
- Before usage an instruction is to be given by a trainer or instructor for this product authorized by the supplier.
- The installation and maintenance of the fire extinguishing components have to take place according to the specifications of the supplier/manufacturer, ISO15779, CEN/TR 15276-2 and/or evaluation guideline BRL-K23003.
- For specific details regarding the owner's manual, see CEN/TR 15276-1.

Point of interest during use or limitation of use

The condensed aerosol extinguishing components should not be used on fires involving the following unless relevant testing by accredited testing laboratories has been carried out to the satisfaction of the Authority:

- Temperatures for use of aerosol extinguishing agents shall be within the supplier's listed limits.
- Local applications ¹⁾ of condensed aerosol extinguishing systems are not covered by this product declaration.
 - Local applications require a pre-engineered and pre-designed system which has been tested and approved for a specific application by an authority such as Kiwa or by an accredited testing laboratory.

¹⁾ a local application is used for the extinguishment of surface fires in flammable liquids, gasses, and shallow solids, where the enclosure does not conform to the requirements for total flooding.

The above list may not be exhaustive.

Manual

At delivery the product should be accompanied by an operation manual in the English language, known and authorized by Kiwa.

Following minimum items shall be described:

- Type of aerosol generators;
- Design application density;
- Description of occupancies and hazards to be protected against;
- Specification of aerosol generators;
- Equipment schedule or list of materials for each piece of equipment or device, showing device name; supplier, model or part number and description;
- System calculation;
- Enclosure pressurization and venting calculations;
- Description of fire detection, actuation and control systems.
- Requirements for inspection, maintenance and testing of an aerosol fire-extinguishing system and for the training of inspection and maintenance personnel.

For specific details regarding the owner's manual, see CEN/TR 15276-1.

FirePro Non-Pressurized Condensed Aerosol Generators and Components

Marking

The products should be marked with the Kiwa[®]-mark.



Place of the mark:

- On the generator

Required specifications:

- Name of the product and supplier
- Supplier's type designation
- Production date and serial number
- Mass of aerosol-forming compound
- Temperature range
- Storage humidity range
- Service life
- Distances as specified in table 5
- Reference to the application instructions
- Certification mark
- Class A according EN2
- Class B according EN2

Method of marking:

- Non-erasable and non-detachable;
- Non-flammable;
- Permanent and legible

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:

- FirePro Systems Ltd
- and, if necessary,
- Kiwa Nederland B.V.

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

FirePro Non-Pressurized Condensed Aerosol Generators and Components

Product specifications

Table 1

Fire Class	Listing	According CEN/TR	Pre burn time	Soak period	Test room	Density
EN2	Material / fuel	15276-1	in seconds	in seconds	in m ³	in grams / m ³
A	Wood crib	A.6.1	120	600	105.4	102
A	Class A compatible wood crib test	-	120	600	105.4	74
A	Poly methyl methacrylate	A.6.3	210	600	100	55.2
A	Polypropylene	A.6.3	210	600	100	55.2
A	ABS	A.6.3	210	600	100	62
A	Reformed wood (chops)	A.6.4	360	600	100	55.2
A	MDF	A.6.4	360	600	100	55.2
A	Multilayers plywood	A.6.4	360	600	100	55.2
B	Heptane (830 Kilowatt)	A.6.2	30	30	100	52
B	Heptane (6 Megawatt)	-	30	30	1250	52
C	Propane (30 Kilowatt)	-	30	30	100	30
F	Solid deep-frying fat	-	30	1800	80	76
B	Nedalco alcohol Fortoir min. 96%	-	30	600	80	52
B	Petrol Euro95	-	30	600	80	52

Table 2

Type	Housing Type	Efficiency in %	Type	Housing Type	Efficiency in %
FP1200 T/S/TS	Box	63	FP20 SE	Cylinder	60
FP2000 T/S/TS	Box	60	FP20 T/TH	Cylinder	70
FP3000 T/S/TS	Box	61	FP40 S	Cylinder	61
FP4200 T/TS	Box	60	FP40 T	Cylinder	62
FP5700 T/S/TS	Box	59	FP80 S	Cylinder	59
			FP80 T	Cylinder	60
			FP100 S	Cylinder	61
			FP200 S	Cylinder	59
			FP500 S	Cylinder	66

FP20 SE, FP40 S and FP80 S are current models (Double outlet – upper and bottom part)
 FP20 T/TH, FP40 T and FP80 T are new models (Single outlet – bottom part)

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Table 3

Type	Housing Type	Agent distribution according CEN/TR 15276-1			Maximum area coverage in m
		Minimum height in m	Maximum area coverage in m	Maximum height in m	
FP1200 T/S/TS	Box	0.45	5.66 * 5.66	3.5	2.02 * 2.02
FP2000 T/S/TS	Box			3.5	3.16 * 2.09
FP3000 T/S/TS	Box			4.0	3.16 * 2.79
FP4200 T/TS	Box			5.0	3.16 * 3.16
FP5700 T/S/TS	Box			8.0	3.16 * 2.56
FP20 SE/T/TH	Cylinder	0.45	1.00 * 0.55	1.0	0.50 * 0.50
FP40 S/T	Cylinder	0.45	1.00 * 1.08	1.0	0.70 * 0.70
FP80 S/T	Cylinder	0.45	1.00 * 2.12	2.0	0.70 * 0.70
FP100 S	Cylinder	0.45	1.63 * 1.63	1.0	1.10 * 1.10
FP200 S	Cylinder	0.45	2.30 * 2.30	2.0	1.09 * 1.09
FP500 S	Cylinder	0.50	3.00 * 4.01	3.0	1.84 * 1.10

Table 4

Type	Housing Type	Discharge time In Sec	Type	Housing Type	Discharge time In Sec
FP1200 T/S/TS	Box	15 - 20	FP20 SE/T/TH	Cylinder	3 - 6
FP2000 T/S/TS	Box	15 - 20	FP40 S/T	Cylinder	4 - 8
FP3000 T/S/TS	Box	15 - 20	FP80 S/T	Cylinder	4 - 8
FP4200 T/TS	Box	15 - 20	FP100 S	Cylinder	5 - 10
FP5700 T/S/TS	Box	15 - 20	FP200 S	Cylinder	5 - 10
			FP500 S	Cylinder	5 - 10

Table 5

Type	Housing Type	Distance in m		
		75°C	200°C	400°C
FP1200 T/S/TS	Box	1.5	n/a	n/a
FP2000 T/S/TS	Box	1.5	n/a	n/a
FP3000 T/S/TS	Box	2.0	0.6	n/a
FP4200 T/TS	Box	2.5	0.6	n/a
FP5700 T/S/TS	Box	2.0	0.6	n/a
FP20 SE	Cylinder	0.1	n/a	n/a
FP20 T/TH	Cylinder	0.1	n/a	n/a
FP40 S	Cylinder	0.1	n/a	n/a
FP40 T	Cylinder	0.15	n/a	n/a
FP80 S	Cylinder	0.1	n/a	n/a
FP80 T	Cylinder	0.1	n/a	n/a
FP100 S	Cylinder	0.3	n/a	n/a
FP200 S	Cylinder	0.4	0.1	n/a
FP500 S	Cylinder	1.0	0.3	n/a