

Fire suppression system for engine compartment

Issued to**BlazeCut s.r.o.**

Triblavinská 3191, SK-900 25 Chorvátsky Grob, Slovakia

Manufacturing site
same as above**Product and product name**BlazeCut Automatic Fire Suppression System
For details, see page 2.**Classification**

Test scenario rating	Level of openness	Class A fire
B	4	A

Technical data/Performance

See appendix to this certificate.

Certificate

The product described in this certificate fulfils the requirements in RISE Certification rules regarding Fire suppression systems in engine compartments of buses, coaches and other heavy vehicles, SPCR 183 issue 2020-04-06. The certification is based on the manufacturer's technical file and type tests performed in accordance with standards specified in the appendix to this certificate.

Marking

Marking shall show SPCR 183, RISE logo, manufacturer's logo, the number of this certificate, the name of the product, the name of the manufacturer and RISE p-symbol. See last page in this certificate for details.

Validity

This certificate is valid until no longer than 2029-02-15. The validity of this certificate can be verified at RISE homepage. This edition of the certificate replaces previous editions.

Miscellaneous

The manufacturer's in-house inspection is under surveillance by RISE in accordance with section 4 and 5 of SPCR 183. Other terms and conditions are set out in section 6 of SPCR 183.



Martin Tillander

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Product information**Technical data of the tested suppression system**

Table 1 shows technical data of the suppression system tested for 4 m³ engine compartment volumes. The system may be scaled to fit the size of a specific engine compartment according to the scaling rules in SP Method 4912.

Table 1, technical data of the tested fire suppression system

Suppression agent	BlazeCut ABC Powder
Suppression agent volume and mass	Volume of cylinder 7.8 L, amount of suppression agent 6 kg
Propellant gas	Nitrogen
Mass of propellant gas	130 g
Working pressure	25 bar – operating pressure at 20°C
Suppression agent delivery hose	Red fire hose, ½", inner diameter 13 mm. Red fire hose, ¼", inner diameter 6mm
Suppression agent delivery pipes	Stainless steel pipe OD/ID = 12/10 mm
Total length of agent delivery system	20 m, 10 m per outlet
Number of nozzles	6 pcs
Type of nozzles	3 x ANP120, 2 x ANP160, 1 x ANP360
Distance to the most remote nozzle	9.3 m
Fittings, amount of each type	Straight coupling 12 pcs 90° elbow 9 pcs 45° elbow 1 pc T-coupling 4 pcs
Thermal cycling resistance	ISO 16750-3:2012
Mechanical stress resistance (vibration and shock)	ISO 16750-3:2012 (Test VII)
Corrosion resistance	ISO 21207:2022, test method B (3 cycles)

Product performance

Performance rating according to SP Method 4912

Table 2, Fire scenario

Rating	Description	Ventilation (m³/s)	Result
A +	Low fire load	3	
	High fire load	3	
	Hidden fire	3	
A	Hidden fire	1.5	
B	Hidden fire	0	Pass
C	Low fire load	3	
	High fire load	3	
D	Low fire load	0	Pass*
E	High fire load	0	Pass
	High fire load	1,5	Pass
	Low fire load	1.5	Pass
	Re-ignition >45s	0	Pass (no re-ignition)

*Passed with the mass of extinguishing agent reduced to 83% of the nominal mass.

Table 3, level of openness

Level	Criteria
1	Fire tests passed with open mockup
2	Fire tests passed without mockup floor and ceiling
3	Fire tests passed without mockup floor
4	Fire tests passed with all sides closed on mockup

Table 4, class A fire

Description	Ventilation (m³/s)	Remarks
Class A fire	0.5	Extinguished within 60 s after activation of the suppression system. No re-ignition.
Pass		

Conditions

Electrical equipment included in the system shall have a classification of at least IP65, and be tested in accordance with ISO 20653:2013.

A risk assessment in accordance with SPCR 183 section 3.2 shall be made prior to equipment being placed into service. The risk assessment shall be made by personnel having documented experience for the task.

It is the responsibility of the suppression system manufacturer to assure compliance of its suppression system components with legal requirements and vehicle manufacturer requirements.

The marking of the product shall be legible and durable and be designed as below, size 40x60 mm. It shall be applied in conjunction to the engine compartment.

Marking plate:



The marking plate template is a black rectangle with white text and fields. On the left side, the RISE logo is displayed, followed by 'SPCR 183'. Below this, there are three rows of text: 'Certificate number:', 'Product name:', and 'Classification:', each followed by a white rectangular field for input. On the right side, there is a larger white rectangular field labeled 'manufacturer name/logo'.