



CERTIFICATE

Product certificate K-0214886/01



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Valid until *Indefinite*

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Fire Protection of life stock in stables based on watermist

STATEMENT BY KIWA

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

MJ-Tech B.V.

complying with the technical specifications as laid down in this process 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 (TIC) Testing, Inspection and Certification – scheme K21045/02 “Fire Protection Systems” of March 30th, 2021 and Specific Certification Program SCP06/01 “Fire Protection Systems - Application - Fire Protection of life stock in stables based on watermist”.

Kiwa licenses the certification mark to the certified company. The validity of a certificate can be checked on www.kiwa.nl.

This certificate remains the property of Kiwa.

Ron Scheepers
Kiwa

Further information on the application and the applicable certification can be obtained from the certified company.

*This certificate consists of 4 pages.
Publication of this certificate is allowed.*

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Certification process
consists of initial and
regular assessment of:
• quality system
• product

Fire Protection Systems - Application - Fire Protection of life stock in stables based on watermist

Technical specification & approval

The Kiwa (TIC) Testing, Inspection and Certification – scheme K21045/02 “Fire Protection Systems” of March 30th, 2021 and Specific Certification Program SCP06/01 “Fire Protection Systems - Application - Fire Protection of life stock in stables based on watermist” is based on the following standard(s):

- EN 14972-1 of 2020 - Fixed firefighting systems - Water mist systems - Part 1: Design, installation, inspection and maintenance.

The following components are defining the approved Fire Protection System.

Pump unit MPU 36 frame. Pumps adjusted to house volume.

Tank volume is 10,000 liter. This fulfilling a spray time of 60 minutes.

Ring main against the walls with 0.3 mm nozzles per 1.67 meter.

Pipe in the middle of the house at a height of 3 meters with 1.0 mm nozzles per 1 meter.

The density is 0.11l / min / m3.

Stables wider than 15m in the middle of the pipe at 1/3 and 2/3 width.

The nozzles are made entirely of stainless steel 316 and have a flow rate of 0.13 (0.3 mm) and 0.45 (1.0 mm) l/min at 100 bar, respectively.

The press couplings are attached to the pipe by means of a special pressing pliers. These couplings can withstand pressures up to 250 Bar.

The piping is completely made of stainless steel 304 code EN10217-7.

Per stable is a complete stainless steel ring main (Ø 12 mm.) mounted with steel / stainless steel pipe clamps on the wall.

The piping in the middle of the house for the 1.0 mm nozzles is attached to the roof with stainless steel / steel hooks.

A fire detection system working in accordance with the type approval for this watermist system based on EN 54 - Fire detection and fire alarm systems.

Application and use

It is important that the fire protection of a building or plant be considered as a whole. Water mist systems form only a part, though an important part, of the available facilities, but it should not be assumed that their adoption necessarily removes the need to consider supplementary measures, such as the provision of portable fire extinguishers or other mobile appliances for first aid or emergency use, or to deal with special hazards.

Watermist systems are an effective medium for the extinction of ordinary Class A to EN2 hazards (solid surface burning fires), but it should not be forgotten, in the planning of comprehensive schemes, that there may be hazards for which these mediums are not suitable, or that in certain circumstances or situations there may be dangers in their use requiring special precautions.

Advice on these matters can be obtained from the approved supplier of this manufacturer of the watermist according to scheme K21045 – scope A - Watermist. Information may also be sought from the appropriate fire authority, the health and safety authorities and insurers. In addition, reference should be made as necessary to other national standards and statutory regulations of the particular country.

It is essential that firefighting equipment be carefully maintained to ensure instant readiness when required. Routine maintenance is liable to be overlooked or given insufficient attention by the owner of the system. It is, however, neglected at peril to the lives of occupants of the premises and at the risk of crippling financial loss. The importance of maintenance cannot be too highly emphasized. Installation and maintenance should only be carried out by qualified personnel according to scheme K21045.

Inspection should include an evaluation that the watermist system continues to provide adequate protection for the risk (protected zones as well as state of the art can change over time).

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

Conditions for application

- The detail engineering and installation of the extinguishing system shall to be determined in conformity with the guidelines and calculation methods of the manufacturer.
- The user of the watermist system is instructed by an instructor for this system authorized by the supplier on behalf of the manufacturer.
- The detail engineering, installation and maintenance of the fire extinguishing components have to take place according to the specifications of the manufacturer, EN 14972-1 and TIC K21045. .

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Point of interest during use

See type test report.

This watermist system developed on a low volume per m³ typical for this stable application can only function with a swift fire detection. The tested fire detection system in this configuration proves to be adequate.

The typical watermist system shall only be adequate in fulfilling the objectives if the activation of this fire protection system is without delay.

The safety concept proved only to be successful with swift detection. Delay in activation does not fit in this concept and is not allowed. This may lead to early activations and shall be made aware to the end users.

All openings like doors, windows and ventilation openings must be closed during activation of the watermist system.

Special care is required for the now machinal closed windows / ventilation openings. The influence on the fire protection process is low. The closing of these openings needs a reliable way.

Organizational arrangements on site

The escalation process with the end user and the fire brigade has to be set in a mutual agreed protocol. A safety plan is thus needed. A plan which contents the scenario's, goals, measurements, instructing and regularly training of employees and an automatic reporting to a 24/7 monitoring & alarm receiving centre (EN 50518) trained for this incidents that can ensure direct follow-up. This also include that the cameras can be supervised by the monitoring & alarm receiving centre.

Instructions signs shall be onsite on the doors to inform the rescue services how to behave according the escalation protocol.

The plan has to include the actions on the site itself such as:

- Switched of ventilation;
- Closing doors, windows & ventilation opening;
- Function proof cabling between systems and elements;
- Response time direct to achieve the criteria to have sufficient density on fire within 30 seconds.

Manual

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

Following minimum items shall be described:

- Type of components;
- Design application density in relation to Fire Class according to EN2;
- Description of occupancies and hazards to be protected against;
- 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 (DIOM) Design Installation,& Operating Manual, see EN 14972-1.

Marking

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

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Place of the mark:

- On the watermist system

Required specifications:

- Name of the product and supplier
- Supplier's type designation
- Production date and serial number
- Temperature range
- Storage humidity range
- Service life
- Reference to the application instructions
- Certification mark

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:

- MJ-Tech B.V.
- and, if necessary,
- Kiwa Nederland B.V.

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