

AR 120
April 2024

Approval requirement 120

Foam producing solution for leak detection



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Foreword

This approval requirement (AR) is approved by the Board of Experts (BoE) GASTEC QA, in which relevant parties in the field of gas related products are represented. This Board of Experts supervises the certification activities and where necessary require the GASTEC QA approval requirement to be revised. All references to Board of Experts in this GASTEC QA approval requirement pertain to the above-mentioned Board of Experts.

This AR will be used by Kiwa Nederland BV in conjunction with the GASTEC QA general requirements and the KIWA regulations for certification.

In this AR is established which requirements a product and the requestor/ certificate holder of the GASTEC QA product certificate should meet and the matter to which Kiwa evaluates this.

Kiwa has the method which is established in the certification procedure for the execution of;

- The investigation for provisioning and maintaining a GASTEC QA product certificate based on this AR.
- The periodic evaluations of the certified products for the purpose of maintaining a provided GASTEC QA product certificate based on this AR.

Approved by the Board of Experts: Month date, year

Accepted by Kiwa Nederland B.V.: Month date, year

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The use of this approval requirement by third parties, for any purpose whatsoever, is only allowed after a written agreement is made with Kiwa Nederland B.V. to this end

Contents

Foreword		1
Contents		2
1	Introduction	3
1.1	General	3
1.2	Scope	3
2	Definitions	4
3	Product requirements	5
3.1	General	5
3.2	Suitability for the use on plastic- and elastomeric materials.	5
3.3	Infrared analyses	5
4	Marking, instructions and packaging	6
4.1	Marking	6
4.2	Instructions	6
4.3	Packaging	6
5	Quality system requirements	7
6	Summary of tests	8
6.1	Test matrix	8
7	List of referenced documents and source	9
7.1	Standards / normative documents	9

1 Introduction

1.1 General

This GASTEC QA approval requirement (AR) in combination with the GASTEC QA general requirements, is applied by Kiwa as the basis for the issuing and maintaining the GASTEC QA product certificate for foam producing solution for leak detection.

With this product certificate, the certificate holder can demonstrate to his or her customers that an expert independent organization monitors the production process of the certificate holder, the quality of the product and the related quality assurance.

Next to the requirements established in this AR and the general requirements, Kiwa has additional requirements in the sense of general procedural requirements for certification, as laid down in the internal certification procedures.

This GASTEC QA approval requirement replaces version of September 2019.

List of changes:

- Textual changes
- Update of list of referenced documents
- Reference to ASTM E 168 – 16 in paragraph 3.3 is added

The product requirements are not changed compared to the previous version of the AR.

1.2 Scope

This approval requirement specifies the requirements for foam producing solution for leak detection for gas leaks on metal- and plastic piping systems within a temperature range of 0 °C up to and including 50 °C and an operating pressure of 20 mbar up to and including 8 bar. This approval requirement is applicable on ready-made leak detection solutions.

2 Definitions

In this approval requirement, the following terms and definitions are applicable:

Board of Experts: The Board of Experts Gastec QA.

Foam producing leak detection solution: Aqueous solution with low surface tension, which indicates small gas leaks by formation of foam bubbles.

See also the definitions mentioned in the GASTEC QA general requirements.

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3 Product requirements

3.1 General

The product shall comply with the requirements of EN 14291 “Foam producing solutions for leak detection on gas installations”, except for paragraph 4.7, the requirements for freezing point.

In addition to EN 14291, the products shall also comply with the following additional requirements:

3.2 Suitability for the use on plastic- and elastomeric materials.

In addition to EN 14291, clause 5.2, an ISO 17025 accredited test report shall be available which proves that the leak detection solution do not have a negative influence on plastic- and elastomeric materials.

3.3 Infrared analyses

An initial infrared analysis according to ASTM E 168 – 16 shall be made of the leak detection solution. This analysis shall be used for comparing the compounds on each product verification.

4 Marking, instructions and packaging

4.1 Marking

In addition to EN 14291, clause 7, the product shall be marked with GASTEC QA, GASTEC QA logo or punchmark.

4.2 Instructions

The supplier shall provide an instruction manual with the product. The instruction manual shall be written in the Dutch language, containing information that the product is GASTEC QA certified. In the instructions will also be included the information as described in clause 7 of EN 14291.

4.3 Packaging

The packaging of the product shall avoid contamination and damages from external influences.

5 Quality system requirements

The requirements for the quality system are described in the GASTEC QA general requirements. An important part of this are the requirements for drawing up a risk analysis (e.g., an FMEA) of the product and the production process in accordance with chapters 3.1.1.1 and 3.1.2.1. This risk analysis shall be available for inspection by Kiwa.

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6 Summary of tests

This chapter contains a summary of tests to be carried out during:

- The initial product assessment;
- The periodic product verification;

6.1 Test matrix

Description of requirement	Clause (EN 14291)	Test within the scope of		
		Initial product assessment	Product verification	
			Verification	Frequency
Surface tension	4.1	X		
Foam stability	4.2	X	X	Once a year
Corrosiveness	4.3	X		
pH-value	4.4	X	X	Once a year
Compatibility with non-hardening sealing materials and lubricants	4.5	X		
Flammability	4.6	X		
Toxicological harmlessness	4.8	X		
Marking	7	X	X	Once a year
Additional GASTEC QA requirements				
Suitability on plastic- and elastomeric materials	3.2	X		
Infrared analyses	3.3	X	X	Once a year
Marking	4.1	X	X	Once a year
Instruction	4.2	X		
Packaging	4.3	X		

7 List of referenced documents and source

7.1 Standards / normative documents

All normative references in this approval requirement refer to the editions of the standards as mentioned in the list below.

EN 14291: 2004	Foam producing solutions for leak detection on gas installations
ASTM E 168 – 16	Standard Practices for General Techniques of Infrared Quantitative Analysis

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