

AR 58

February 2018

validated Dutch version

Approval requirement 58

Saddles with clamp connection of modified poly(vinyl chloride) (PVC-HI)



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Foreword

This GASTEC QA (Dutch version) approval requirement has been approved by the Board of Experts product certification 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 GASTEC QA approval requirement (Dutch version) will be used by Kiwa Nederland BV in conjunction with the GASTEC QA general requirements and the KIWA regulations for certification.

This approval requirement is a translation from the Dutch validated version and can only be used as a supporting document.

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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	Rubber parts	5
4	Test methods	6
4.1	Size groups	6
5	Marking and instructions	7
5.1	Marking	7
5.2	Instructions	7
6	Quality system requirements	8
7	Summary of tests	9
7.1	Test matrix	9
8	List of referenced documents and source	10
8.1	Standards / normative documents	10

1 Introduction

1.1 General

This GASTEC QA approval requirement in combination with the GASTEC QA general requirements include all relevant requirements, which are adhered by Kiwa as the basis for the issue and maintenance of a GASTEC QA certificate for saddles with clamp connection of modified poly(vinyl chloride) (PVC-HI).

This GASTEC QA approval requirements replace the GASTEC QA approval requirements 58 "saddles with clamp connection of modified poly(vinyl chloride) (PVC-HI)", dated January 2012.

List of changes:

- All general requirements have been removed and included in the document GASTEC QA general requirements
- Chapter 5.1 added: user instructions
- Chapter 6 added: requirements for the quality system

The requirements to the product have not changed compared to the previous version of the approval requirement.

1.2 Scope

This approval requirement describes the requirements for saddles with clamp connection of modified poly(vinyl chloride) (PVC-HI) intended for pipe systems made of high-impact polyvinylchloride (PVC-HI for underground gas distribution of natural gas with a maximum operating pressure of 200 mbar.

2 Definitions

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

Board of Experts: The Board of Experts Gastec QA.

Maximum operating pressure: maximum pressure that a component is capable of withstanding continuously in service under normal operating conditions.

Natural gas: 2nd family gas in accordance with EN 437

3 Product requirements

3.1 General

The product shall comply with the requirements in NEN 7232: Plastics piping systems for gas supply – Saddles with clamp connection of modified poly(vinyl chloride) (modified PVC) - Requirements and test methods

3.2 Rubber parts

In addition to NEN 7232 paragraph 4.4.5, the material of the rubber parts shall comply with EN 682, type GAL or GBL.

4 Test methods

4.1 Size groups

In addition to NEN 7232 paragraph 6.1.

The tests shall be performed on 1 sample per size group as per table 1:

<i>Size group</i>	<i>1</i>	<i>2</i>	<i>3</i>
Pipe diameter [mm]	$d < 110$	$110 \leq d \leq 200$	$d > 200$

Table 1 size groups

5 Marking and instructions

5.1 Marking

In addition to the marking as described in NEN 7232 the pipes shall be marked with GASTEC QA or the GASTEC QA logo.

5.2 Instructions

The supplier shall provide user instructions in the Dutch language. These instructions shall have the following information included:

- The use and installation of the product
- The way to check if the product is installed correctly
- The way the product should be stored
- The maximum storage period

6 Quality system requirements

The supplier shall make a risk assessment of the product and production process according to chapter 3.1.1.1 and 3.1.2.1 of the GASTEC QA general requirements. The risk assessments shall be available to Kiwa for review.

7 Summary of tests

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

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

7.1 Test matrix

Description of requirement	Clause	Test within the scope of		
		Initial product assessment	Product verification	
			Verification	Frequency
Product requirements	4			
Implementation of the saddles	4.1	X		
Appearance and finish of the saddles	4.2	X		
Connection of the saddles	4.3	X		
Material of the saddles	4.4			
General	4.4.1	X		
Colour	4.4.2	X		
Vicat softening temperature	4.4.3	X	x	1 x per year
k-value	4.4.4	X		
Dimensions and admissible dimensional deviation of the saddles	4.5			
General	4.5.1	X		
Wall thickness and surface of the saddles	4.5.2	X	X	1 x per year
Sealing of the saddles	4.6	X		
Connections in the saddles	4.7	X		
Connection pieces	4.8	X		
Functional requirements	5			
Leak tightness at internal pressure with and without mechanical load	5.1.1	X	X	1 x per year
Leak tightness at external pressure with and without mechanical load	5.1.2	X		
Resistance to impact at 0°C	5.2	X	X	1 x per year
Influence of heating on the saddles and parts of the saddles	5.3	X	X	1 x per year
Tensile strength and strength of full-end load coupling	5.4.1	X	X	1 x per year
Leak tightness of the rubber seal of non-end-load connection piece	5.4.2	X		
Marking and documentation	7	X	X	1 x per year
Additional GASTEC QA requirements				
Rubber parts	KE 58: H 3.2	X		
Marking and user instructions	KE 58: H.5	X		

8 List of referenced documents and source

8.1 Standards / normative documents

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

EN 437: 2003+A1: 2009	Test gases- test pressure – appliance categories
NEN 7232: 2011	Kunststofleidingssystemen voor gasvoorziening – zadels met klampverbindingen van slagvast polyvinylchloride (slagvast PVC) – eisen en beproevingsmethoden.
EN 682: 2002 +A1: 2005	Afdichtingen van elastomeer – materiaaleisen voor afdichtingen van verbindingen in buizen en hulpstukken voor gas en vloeibare koolwaterstoffen.