

Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0) 1925 655 116
F : +44 (0) 1925 655 419
E : warrington@exova.com
W: www.exova.com



Testing. Advising. Assuring.

Title:

EXTENDED APPLICATION
REPORT IN ACCORDANCE
WITH EN/TS 15117:2005

Notified Body No:

0833

Product Name:

"Henco PEXc/AL/PEXc"

Report No:

194295

Issue No:

2

Prepared for:

Henco
Toekomstlaan 27
Herentals
B-2200
Belgium

Date:

9th March 2011

1. Introduction

This report extends the field of application of test results obtained for “Henco PEXc/AL/PEXc”, a family of coated aluminium pipes. Extended application enables the prediction of fire performance, on the basis of one or more test results to the same test standards and enables the classification of product ranges and product families.

2. Details of Product Family

A product family is a group of products, which differ only in aspects that do not influence the properties required in the relevant product standard and, if relevant, end-use parameters, for which the reaction to fire performance remains unchanged (i.e. does not get worse).

The product family for which extended application is to be used is “Henco PEXc/AL/PEXc”, a family of coated aluminium pipes. There are a number of product properties which vary within this product family, namely, colour, external and internal pipe diameter, aluminium pipe wall thickness, individual coating, adhesive application rates and total coating thickness. These properties were assessed to determine their influence on the fire performance of the product when tested in accordance with EN ISO 11925-2, and classified in accordance with EN 13501-1.

2.1 Product description

The product family, “Henco PEXc/AL/PEXc”, a family of coated aluminium pipes, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Coated aluminium water pipe	
Product reference		“Henco PEXc/AL/PEXc”	
Overall external diameter		15.8 to 62.82mm (determined by Exova Warringtonfire)	
Overall internal diameter		11.6 to 53.20mm (determined by Exova Warringtonfire)	
External coating	External PEXc Layer Test face	Generic type	See note 1
		Product reference	See note 1
		Name of manufacturer	See note 1
		Colour	Yellow or white
		Number of coats	One
		Application rate per coat	18.7 to 254.2 g/linear metre
		Application method	Extrusion
		Specific gravity	0.955 g/cm ³
		Flame retardant details	See note 2
		Curing process per coat	See note 3
	Adhesive layer	Generic type	Low density polyethylene (LDPE) based adhesive
		Product reference	See note 1
		Name of manufacturer	See note 1
		Colour	“Natural”
		Number of coats	One
		Application rate per coat	4.4 to 17.5 g/linear metre
		Application method	Extrusion
		Specific gravity	0.926 g/cm ³
		Flame retardant details	See note 2
Curing process per coat	See note 3		

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Aluminium pipe		Product reference	See note 1
		Generic type	Aluminium
		Name of manufacturer	See note 1
		External diameter	14.9 to 60.05mm
		Internal diameter	14.1 to 57.65mm
		Wall thickness	0.4 to 1.2mm
		Density	2.7g/cm ³
		Flame retardant details	This component is inherently flame retardant.
Internal coating	Adhesive layer	Generic type	Low density polyethylene (LDPE) based adhesive
		Product reference	See note 1
		Name of manufacturer	See note 1
		Colour	"Natural"
		Number of coats	One
		Application rate per coat	4.1 to 16.7 g/linear metre
		Application method	Extrusion
		Specific gravity	0.926 g/cm ³
		Flame retardant details	See note 2
	Curing process per coat	See note 3	
	Internal pipe coating	Generic type	See note 1
		Product reference	See note 1
		Name of manufacturer	See note 1
		Colour	"Natural"
		Number of coats	One
		Application rate per coat	38.6 to 285.7 g/linear metre
		Application method	Extrusion
		Specific gravity	0.946 g/cm ³
		Flame retardant details	See note 2
Curing process per coat	See note 3		
Brief description of manufacturing process		See note 3	

Note 1: The sponsor of the test has provided this information but at the specific request of the sponsor, these details have been omitted from the report and are instead held on the confidential file relating to this investigation.

Note 2: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

Note 3: The sponsor was unwilling to provide this information.

3. Test reports, classification reports & test results in support of classification

3.1 Test reports and classification reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Exova warringtonfire	Henco	WF 194118, WF 194119	EN ISO 11925-2
Exova warringtonfire	Henco	WF 194296 (Issue 2)	EN 13501

3.2 Test results

Test method & test number		Parameter	No. tests	Results	
				Continuous parameter - mean (m)	Compliance parameters
EN ISO 11925-2	30s exposure - surface	F _s	6, 6	Nil, Nil	Compliant
		Flaming droplets/ particles		None, None	Compliant
	30s exposure - edge	F _s	6, 6	Nil, Nil	Compliant
		Flaming droplets/ particles		None, None	Compliant

4. Classification and field of application

4.1 Definition of Limits of Extended Application

Two tests were conducted in accordance with EN ISO 11925-2. The tests were performed on the following two product variations, representing the extreme ends of the product range:

Product A.

A white coloured product having the maximum internal and external pipe diameter, the maximum aluminium pipe wall thickness, the maximum individual coating and adhesive application rates and maximum total coating thickness.

Product B.

A yellow coloured product having the minimum internal and external pipe diameter, the minimum aluminium pipe wall thickness, the minimum individual coating and adhesive application rates and minimum total coating thickness.

4.2 EN ISO 11925-2

Both products were tested formally in accordance with EN ISO 11925-2 using surface and edge flame application, in both cases, there was no flame spread from the point of flame application. The average flame front was 100% below the maximum value allowed for Class E, (EN 13501-1).

4.3 Reference of classification

This classification has been carried out in accordance with EN 13501-1:2007+A1: 2009 and EN/TS 15117.

4.4 Classification

The products, "Henco PEXc/AL/PEXc", a family of coated aluminium pipes, in relation to their reaction to fire behaviour are classified:

Reaction to fire classification: E

This classification is valid for the following end use applications:

- i) Construction applications, excluding flooring and linear pipe thermal insulation

This classification is also valid for the following product parameters:

Overall external diameter	- 15.8mm to 62.82mm
Overall internal diameter	- 11.60mm to 53.20mm
Colour	- White or yellow
External PEXc layer application rate	- 18.7g/linear meter to 254.2 g/linear meter
External adhesive application rate	- 4.4 g/linear meter to 17.5 g/linear meter
Aluminium pipe external diameter	- 14.9mm to 60.05mm
Aluminium pipe internal diameter	- 14.1mm to 57.65mm
Aluminium pipe wall thickness	- 0.4mm to 1.2mm
Internal adhesive application rate	- 4.1 g/linear meter to 16.7 g/linear meter
Internal pipe coating application rate	- 38.6 g/linear meter to 285.7 g/linear meter
Product composition	- No variation other than stated allowed
Product configuration	- No variation other than stated allowed

5. Limitations

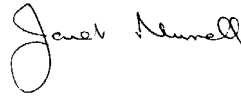
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SIGNED



.....
Matthew Dale
Certification Engineer

APPROVED



.....
Janet Murrell
Technical Manager
For and on behalf of:
Exova Warringtonfire

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