

# UL-EU CERTIFICATE

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UL-EU-01305-EN

**Issue date**  
15-10-2024

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1

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4705

**Certificate Holder:**

Greentech Thermal Insulation Products Mfg Co LLC

**Address:**

PO Box 3350  
New Industrial Area  
Umm AL Quwain  
United Arab Emirates

**Product:**

HEATSHIELD PC120

**Places of production:**

U/001

**Standard:**

EAD 350454-00-1104, September 2017

Authorised Signatory:

A blue ink signature of Chris Johnson.

Chris Johnson

Issued by UL International (UK) Ltd

This is to certify that representative samples of the Certified Product listed above have been investigated by Underwriters Laboratories to the Standard(s) indicated on this Certificate, in accordance with the UL Global Services Agreement and the UL-EU Mark Service Terms and Conditions ("Agreement"). The Certificate Holder is entitled to use the UL-EU Mark for the Certified Product listed on the certificate and manufactured at the production site(s) listed, in accordance with the terms of the Agreement. Only those products bearing the UL-EU Mark for Europe should be considered as being covered by UL's UL-EU Mark Service. This Certificate shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.



## Appendix UL-EU CERTIFICATE UL-EU-01305-EN

This certificate relates to the use of HEATSHIELD PC120, a pipe closure device used to form penetration seals where combustible pipes penetrate walls and floors. The detailed scope is given in pages 4 to 9 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 120 minutes (EI 120).

The product is certificated on the basis of:

- i) Inspection and surveillance of factory production control by UL
- ii) Fire resistance test data in accordance with EN 1366-3:2021
- iii) Classification in accordance with EN 13501-2:2016
- iv) Durability and Serviceability as defined in EAD 350454-00-1104, September 2017



# Appendix UL-EU CERTIFICATE UL-EU-01305-EN

## Table of Contents

I.	SPECIFIC PARTS OF THE UL-EU CERTIFICATION .....	4
1	Technical description of the product .....	4
2	Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104: 2017 .....	5
3	Performance of the product and references to the methods used for its assessment .....	7
	<b>ANNEX A – Resistance to Fire Classification – HEATSHIELD PC120 .....</b>	<b>8</b>
A.1	Rigid wall constructions with wall thickness of minimum 125 mm .....	8
A.1.1	Penetration seals, in concrete / masonry walls.....	8
A.2	Rigid floor constructions with thickness of minimum 150 mm.....	9
A.2.1	Penetration seals, in concrete/masonry floors.....	9



# Appendix UL-EU CERTIFICATE UL-EU-01305-EN

## I. SPECIFIC PARTS OF THE UL-EU CERTIFICATION

### 1 Technical description of the product

- 1) HEATSHIELD PC120 is a pipe closure device used to form penetration seals where combustible pipes penetrate walls and floors.
- 2) The HEATSHIELD PC120 is supplied with intumescent liner complete within metal steel shell, to be clamped around the service and screw fixed back to the supporting element. The HEATSHIELD PC120 is supplied with powder coated steel shells. HEATSHIELD PC120 are oversized to allow for the natural gradient of pipework for flow purposes and inconsistencies of pipe installation.
- 3) The additional component HEATSHIELD S500 is a fire-resistant sealant to be used as installation aid in HEATSHIELD PC120 system which is supplied in liquid form contained within 300 ml cartridges and 600 ml foil packs.
- 4) The applicant has submitted a written declaration that the product and/or constituents of the product contains no substances which have been classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No. 1272/2008 and listed in the 'indicative list on dangerous substances' of the EGDS – taking into account the installation conditions of the construction product and the release scenarios resulting from there.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

- 5) The use category of HEATSHIELD PC120 in relation to BWR 3 (Hygiene, health and environment) is IA1, S/W2.



## Appendix UL-EU CERTIFICATE UL-EU-01305-EN

### 2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104: 2017

Detailed information and data is given in Annex A.

The intended use of system HEATSHIELD PC120 is to reinstate the fire resistance performance of rigid wall and floor constructions, where they are penetrated by services.

1) The specific elements of construction that the system HEATSHIELD PC120 may be used to provide a penetration seal in, are as follows:

- a. Rigid walls: The wall must have a minimum thickness of 125 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 450 kg/m<sup>3</sup>.
- b. Rigid floors: The floor must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 600 kg/m<sup>3</sup>.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

2) The system HEATSHIELD PC120 may be used to provide a penetration seal with specific supporting constructions and substrates (for details see Annex A).

3) The first support (service support construction) for plastic pipes in rigid walls has to be at maximum 450 mm (measured from the surface of the separating element). In rigid floors the first support has to be at maximum 250 mm from top surface of floor.

4) The designation U/U, C/U, U/C or C/C indicates whether or not the product under test are capped during the fire test.

The first letter refers to the situation in the furnace and the second to the situation outside the furnace (see table).

Test condition	Configuration	
	Inside the furnace	Outside the furnace
U/U	Uncapped	Uncapped
C/U	Capped	Uncapped
U/C	Uncapped	Capped
C/C	Capped	Capped

The tests carried out with uncapped ends (U/U) correspond to the most unfavorable situation, since the fire can spread more easily because the two ends are open.

The results of these tests may therefore be applied in all situations (U/U, C/U, U/C and C/C).

The C/U tests may be used in the following situations: C/U, U/C and C/C. The U/C tests may in turn be used for situations U/C and C/C, while the C/C tests may only be used in the C/C situation.

5) Where PVC pipes are mentioned in Annex A, this includes PVC-U pipes according to EN 1329-1, EN 1453-1, EN ISO 15493 and EN ISO 1452-2 and PVC-C according to EN 1566-1, EN ISO 15493 and EN ISO 15877-2.

6) In rigid walls and floor, the interface between the pipe and the supporting construction shall be equipped with a bead of HEATSHIELD S500 acrylic sealant with a thickness and width of 10 mm. Gaps between the pipe and supporting construction are to be sealed with mortar in full depth of the supporting construction.



## Appendix UL-EU CERTIFICATE UL-EU-01305-EN

- 7) The provisions made in this European Technical Assessment are based on an assumed working life of the HEATSHIELD PC120 of 10 years, provided that the conditions laid down in the manufacturers datasheet and instructions for the packaging/transport/storage/installation/ use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.
- 8) Type Z<sub>1</sub>: intended for uses in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV. Since the requirements for Type Z<sub>1</sub> are met, also the requirements for Type Z<sub>2</sub> are fulfilled.



# Appendix UL-EU CERTIFICATE UL-EU-01305-EN

## 3 Performance of the product and references to the methods used for its assessment

Product-type: Pipe Collar		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product Performance
<b>BWR 2 Safety in case of fire</b>		
EN 13501-1	Reaction to fire	Class E
EN 13501-2	Resistance to fire	Annex A
<b>BWR 3 Hygiene, health and environment</b>		
EN 1026	Air permeability	No performance determined
EAD 350454-00-1104, Annex C	Water permeability	No performance determined
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Use categories: IA1, S/W2 Declaration of manufacturer
<b>BWR 4 Safety in use</b>		
EOTA TR 001:2003	Mechanical resistance and stability	No performance determined
EOTA TR 001:2003	Resistance to impact/movement	No performance determined
EOTA TR 001:2003	Adhesion	No performance determined
EAD 350454-00-1104, Clause 2.2.9	Durability	Z <sub>1</sub>
<b>BWR 5 Protection against noise</b>		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	No performance determined
<b>BWR 6 Energy economy and heat retention</b>		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 14683, EN ISO 10211, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined



# Appendix UL-EU CERTIFICATE UL-EU-01305-EN

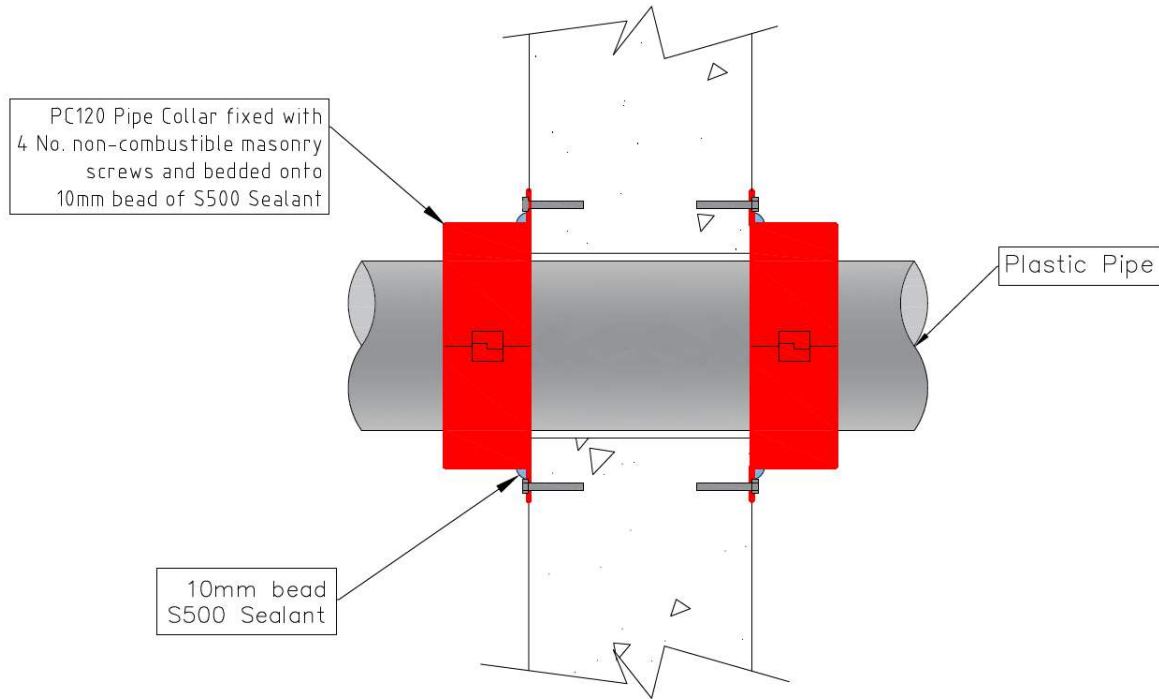
## ANNEX A – Resistance to Fire Classification – HEATSHIELD PC120

### A.1 Rigid wall constructions with wall thickness of minimum 125 mm

#### A.1.1 Penetration seals, in concrete / masonry walls

**Penetration Seal:** Combustible pipes fitted with HEATSHIELD PC 120, to both sides of the wall. Minimum separation between penetration seals of 100 mm.

Construction details:



#### A.1.1.1

Services	HEATSHIELD PC120 model	Collar Inlay	Classification
PVC pipe, Diameter 50 mm, wall thickness 2.4 mm	Ø 55 mm	50 x 4.0 mm	E 120-C/C EI 120- C/C
PVC pipe, Diameter 110 mm, wall thickness 4.2 mm	Ø 110 mm	50 x 8.0 mm	
PVC pipe, Diameter 160 mm, wall thickness 6.2 mm	Ø 160 mm	60 x 10.0 mm	





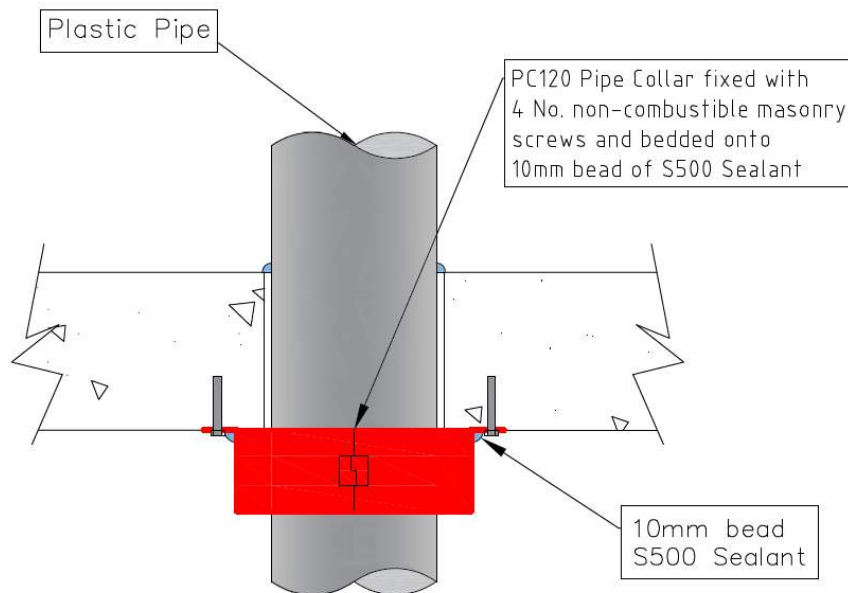
# Appendix UL-EU CERTIFICATE UL-EU-01305-EN

## A.2 Rigid floor constructions with thickness of minimum 150 mm

### A.2.1 Penetration seals, in concrete/masonry floors

**Penetration Seal:** Combustible pipes fitted with HEATSHIELD PC120 to bottom side of the floor. Minimum separation between penetration seals of 100 mm.

Construction details:



#### A.2.1.1

Services	HEATSHIELD PC120 model	Collar Inlay	Classification
PVC pipe, Diameter 50 mm, wall thickness 2.4 mm	Ø 55 mm	50 x 4.0 mm	<b>E 120-C/C</b> <b>EI 120- C/C</b>
PVC pipe, Diameter 110 mm, wall thickness 4.2 mm	Ø 110 mm	50 x 8.0 mm	
PVC pipe, Diameter 160 mm, wall thickness 6.2 mm	Ø 160 mm	60 x 10.0 mm	



## Appendix UL-EU CERTIFICATE UL-EU-01305-EN

The UL-EU Mark, as displayed below, shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.



The minimum height of the registered trademark symbol ® shall be 1 mm. When the overall diameter of the UL-EU Mark is less than 9.5 mm, the trademark symbol may be omitted if it is not legible to the naked eye.

The UL-EU Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Manufacturer's name or trademark and model number shall also appear elsewhere on the product.

All content shall be in accordance with the details provided on this UL-EU Certificate.

### PROCUREMENT

The Production site may reproduce the Mark or obtain it from a UL authorized supplier. The list of UL authorized suppliers can be found on UL's online directory at [www.ul.com](http://www.ul.com).



**Solutions**

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