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# APPROVAL REPORT

**Project No:** PR457525  
**Class:** 1613  
**Product Name:** FLEXIPOL MASA PE100  
**Product Type:** Polyethylene Pipe  
SDR 11 in Sizes 63 to 630mm  
SDR 9 in Sizes 63 to 315mm  
**Name of Listing Company:** ALIAXIS IBERIA SAU  
**Address of Listing Company:** Polígono Zudibiarte s/n  
Okondo, Álava 01409  
Spain  
**Customer ID:** 257545-1  
**Customer website** <https://www.aliaxis.es/>

**Prepared by**

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**Reviewed by**

Claude Bosio  
AVP, Technical Team Manager

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VP, Manager – Fire Protection

**February 17, 2023**

**Date of Approval**

## 1 INTRODUCTION

1.1 ALIAXIS IBERIA SAU requested Approval of the products listed in Section 1.4 and described in Section 2 for compliance with the Standard listed in Section 1.3.

1.2 This report may be freely reproduced only in its entirety and without modification.

### 1.3 Standards

Title	Number	Issue Date
Approval Standard for Polyethylene (PE) Pipe and Fittings for Underground Fire Protection	1613	February 2017

### 1.4 Listing

The product will be listed in the Approval Guide, an on-line resource of FM Approvals, as detailed in an appendix at the end of this Approval Report.

## 2 DESCRIPTION

2.1 The high-density polyethylene pipe discussed in this Report is Approved when made from LyondellBasell Hostalen CRP100 Black PE 100 at the manufacturing location listed in Section 6. This resin is classified as PE100.

2.2 The products discussed in this Report have been approved for service in potable water systems with a valid (French) Certificate of Sanitary Conformity (ASC).

2.3 The high-density polyethylene pipe discussed in this Report conforms to EN 12201 Plastics piping systems for water supply, and for draining and sewerage under pressure – Polyethylene (PE).

## 3 EXAMINATIONS AND TESTS

3.1 Samples were submitted for examination and testing. The samples were considered to be representative of the product line and were examined, tested, and compared to the manufacturer's drawings. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.

3.2 All testing and analysis considered appropriate was conducted and verified to be in compliance with the Standards defined in Section 1.3.

## 4 MARKING

The following information is marked on the pipe at a minimum interval of 5 ft (1.5 m) and meets FM Approvals requirements:

- Manufacturer's name or trademark, "FELXIPOL MASA";
- Nominal size;
- Pressure class;
- Standard material code designation, "PE100";
- Recognized standard to which the pipe is designed and manufactured, "EN 12201";

- Lot number (raw material reference, extrusion line, diameter and thickness);
- Year of manufacture;
- Shift number;
- Meter counter;
- FM Approvals marking;

## 5 REMARKS

- 5.1 The manufacturer's recommendations for the butt fusion process must be strictly adhered to in order to obtain an adequate fusion joint between individual pipe sections and/or fittings.
- 5.2 The manufacturer's recommendations for installation of the pipe and fittings discussed in this Report must be followed at all times. Of particular importance is the provision for adequate anchorage. Pipe and fittings must be anchored in accordance with FM Global Property Loss Prevention Data Sheets.
- 5.3 The pipe and fittings can be damaged by sharp particles traveling at high velocities. The pipe fittings described in this Report are not recommended for use in installations where the water velocity exceeds 15 ft/sec (4.6 m/sec).
- 5.4 The HDPE pipe and fittings discussed in this Report are for use in underground fire protection systems only.
- 5.5 Polyethylene pipe and fittings are generally considered to be immune to corrosive soils and ground waters. However, the pipe and fittings should not be used in locations where there is constant spillage or in, by soil analysis, the presence of aromatic hydrocarbons, including gasoline.

## 6 SURVEILLANCE AUDIT

The design and manufacturing facilities at the following location(s) shall be visited on a routine basis. The facility processes and quality control procedures in place have been determined to be satisfactory to manufacture product identical to that tested and Approved. An FM Approved Products/Specification Tested Revision Request Form shall be submitted to FM Approvals for requesting to manufacture product at any additional or alternate manufacturing facilities which are not listed below.

### Design

ALIAXIS IBERIA SAU  
Polígono Zudibiarte s/n  
Okondo, Álava 01409  
Spain

### Manufacturing

ALIAXIS IBERIA SAU  
Polígono Zudibiarte s/n  
Okondo, Álava 01409  
Spain

## 7 MANUFACTURER'S RESPONSIBILITIES

- 7.1 Documentation that is applicable to this approval is on file at FM Approvals and listed in the Documentation File, Section 8, of this report. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals. The FM Approved Products/Specification Tested Revision Request Form, shall be forwarded to FM Approvals as notice of proposed changes.

- 7.2** The manufacturer is responsible for control of the product marking and installation, operation, and maintenance instructions for the system.
- 7.3** The manufacturer shall provide installation, operation, maintenance instructions with each system.
- 7.4** In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.
- 7.5** The manufacturer shall conduct the Manufacturing and Production Tests as detailed in the applicable FM Approval Standard.

**8 DOCUMENTATION**

All pertinent Report documents are outlined in the ATTACHMENTS list below.

**9 CONCLUSION**

The pipe and fittings described in Section 1.4 meet FM Approvals requirements. Since a duly signed Master Agreement is on file for this manufacturer, FM Approval is effective the date of this Report.

**PROJECT DATA RECORD:** PR457525

**ATTACHMENTS:** Appendix A - Approval Guide Listing  
Appendix B - Critical Document List

## APPENDIX A – APPROVAL GUIDE LISTING

### Polyethylene Pipe and Fittings

Polyethylene pipe should be installed and anchored according to the pipe manufacturer's instructions and FM Global Property Loss Prevention Data Sheets. For underground use only.

Nominal pipe size is the approximate outside diameter of the pipe. Refer to manufacturer's catalog for pipe inside diameter.

### Polyethylene Pipe

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#### Product Specification

Model No	Product Description	Nominal Pipe Size, mm	Rated Working Pressure		Remarks
			bar	(psi)	
FLEXIPOL MASA PE100	SDR 11 Pipe	63, 75, 90, 110, 125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630	12.5	180	a, b
FLEXIPOL MASA PE100	SDR 9 Pipe	63, 75, 90, 110, 125, 140, 160, 180, 200, 225, 250, 280, 315	14.5	210	a, b

a. The manufacturer's butt-fusion welding instructions must be strictly adhered to for a proper joint.

b. The color of the pipe is black with blue stripes.

<b>Company Name:</b>	ALIAxis IBERIA SAU
<b>Company Address:</b>	Polígono Zudibiarte s/n , Okondo, Álava 01409, Spain
<b>Company Website:</b>	Not Available
<b>Listing Country:</b>	Spain
<b>Certification Type:</b>	FM Approved
<b>Class of Work:</b>	1613-Pipe Ftngs, Undg, PE

## APPENDIX B – CRITICAL DOCUMENT LIST

**Blueprint Report****ALIAxis IBERIA SAU (257545-1)****Class No 1613****Original Project I.D. 457525**

<b>Drawing No.</b>	<b>Revision Level</b>	<b>Drawing Title</b>	<b>Last Report</b>
FM110-11	0	FM PE100 PIPE OD110 SDR-11 (Drawing and Marking)	PR457525
FM110-9	0	FM PE100 PIPE OD110 SDR-9 (Drawing and Marking)	PR457525
FM125-11	0	FM PE100 PIPE OD125 SDR-11 (Drawing and Marking)	PR457525
FM125-9	0	FM PE100 PIPE OD125 SDR-9 (Drawing and Marking)	PR457525
FM140-11	0	FM PE100 PIPE OD140 SDR-11 (Drawing and Marking)	PR457525
FM140-9	0	FM PE100 PIPE OD140 SDR-9 (Drawing and Marking)	PR457525
FM160-11	0	FM PE100 PIPE OD160 SDR-11 (Drawing and Marking)	PR457525
FM160-9	0	FM PE100 PIPE OD160 SDR-9 (Drawing and Marking)	PR457525
FM180-11	0	FM PE100 PIPE OD180 SDR-11 (Drawing and Marking)	PR457525
FM180-9	0	FM PE100 PIPE OD180 SDR-9 (Drawing and Marking)	PR457525
FM200-11	0	FM PE100 PIPE OD200 SDR-11 (Drawing and Marking)	PR457525
FM200-9	0	FM PE100 PIPE OD200 SDR-9 (Drawing and Marking)	PR457525
FM225-11	0	FM PE100 PIPE OD225 SDR-11 (Drawing and Marking)	PR457525
FM225-9	0	FM PE100 PIPE OD225 SDR-9 (Drawing and Marking)	PR457525
FM250-11	0	FM PE100 PIPE OD250 SDR-11 (Drawing and Marking)	PR457525
FM250-9	0	FM PE100 PIPE OD250 SDR-9 (Drawing and Marking)	PR457525
FM280-11	0	FM PE100 PIPE OD280 SDR-11 (Drawing and Marking)	PR457525
FM280-9	0	FM PE100 PIPE OD280 SDR-9 (Drawing and Marking)	PR457525
FM315-11	0	FM PE100 PIPE OD315 SDR-11 (Drawing and Marking)	PR457525
FM315-9	0	FM PE100 PIPE OD315 SDR-9 (Drawing and Marking)	PR457525
FM355-11	0	FM PE100 PIPE OD355 SDR-11 (Drawing and Marking)	PR457525
FM400-11	0	FM PE100 PIPE OD400 SDR-11 (Drawing and Marking)	PR457525
FM450-11	0	FM PE100 PIPE OD450 SDR-11 (Drawing and Marking)	PR457525
FM500-11	0	FM PE100 PIPE OD500 SDR-11 (Drawing and Marking)	PR457525
FM560-11	0	FM PE100 PIPE OD560 SDR-11 (Drawing and Marking)	PR457525
FM63-11	0	FM PE100 PIPE OD63 SDR-11 (Drawing and Marking)	PR457525
FM63-9	0	FM PE100 PIPE OD63 SDR-9 (Drawing and Marking)	PR457525
FM630-11	0	FM PE100 PIPE OD630 SDR-11 (Drawing and Marking)	PR457525
FM75-11	0	FM PE100 PIPE OD75 SDR-11 (Drawing and Marking)	PR457525
FM75-9	0	FM PE100 PIPE OD75 SDR-9 (Drawing and Marking)	PR457525
FM90-11	0	FM PE100 PIPE OD90 SDR-11 (Drawing and Marking)	PR457525
FM90-9	0	FM PE100 PIPE OD90 SDR-9 (Drawing and Marking)	PR457525