

# MONOBLOCK

## DOMESTIC WASTEWATER SOLUTION

The All-In-One System



# BIOROCK

engineered for tomorrow



# THE FUTURE OF WASTEWATER TREATMENT

BIOROCK is home to an internationally-acclaimed team of wastewater specialists who share the goal of providing innovative, sustainable, and eco-friendly water treatment systems.

Our level of expertise and attention-to-detail guarantees only the best, most reliable products, providing the market with the ultimate non-electrical wastewater treatment technologies.

## ADVANTAGES AND BENEFITS OF THE MONOBLOCK ALL-IN-ONE SOLUTION

- MONOBLOCK ■
- Electrical Plants ■
- Organic Media Plants ■

## THE MONOBLOCK SOLUTION

Our **MONOBLOCK Solution** offers a simple yet effective process that requires no electricity, has no moving parts, and needs minimal annual maintenance.

This **plug-and-play sewage system** is perfect for residential properties and small establishments. It combines everything you need to **successfully and cost-effectively treat your wastewater**, while being discreet and odourless.

For your convenience, the system is delivered complete and pre-assembled to make installation even easier.

Media Lifespan Is Up To 10 Years	✓	✗	✗
Low Operational Costs	✓	✗	✗
Minimal Annual Maintenance	✓	✗	✗
Ultra-Compact & Discreet	✓	✗	✗
Non Electric	✓	✗	✓
Long Septic Tank Pump-Out Intervals	✓	✗	✓
Odourless	✓	✗	✓
Silent	✓	✗	✓
Long Absence Periods	✓	✗	✓



## HOW DOES IT WORK?

### Step 1: Primary Tank

The PRIMARY TANK clarifies the raw sewage of fats, oils, greases and organic solids. The sewage water then passes through an effluent filter, before discharging into the BIOROCK reactor.

### Step 2: BIOREACTOR Process

Our BIOREACTOR further purifies the pretreated wastewater using a biological process. To naturally treat the wastewater, our systems use our unique BIOROCK Media, an exclusive and very efficient carrier material for bacteria.

### Step 3: Discharge

Depending on the ground type, effluent will be discharged by gravity, or by a pump.



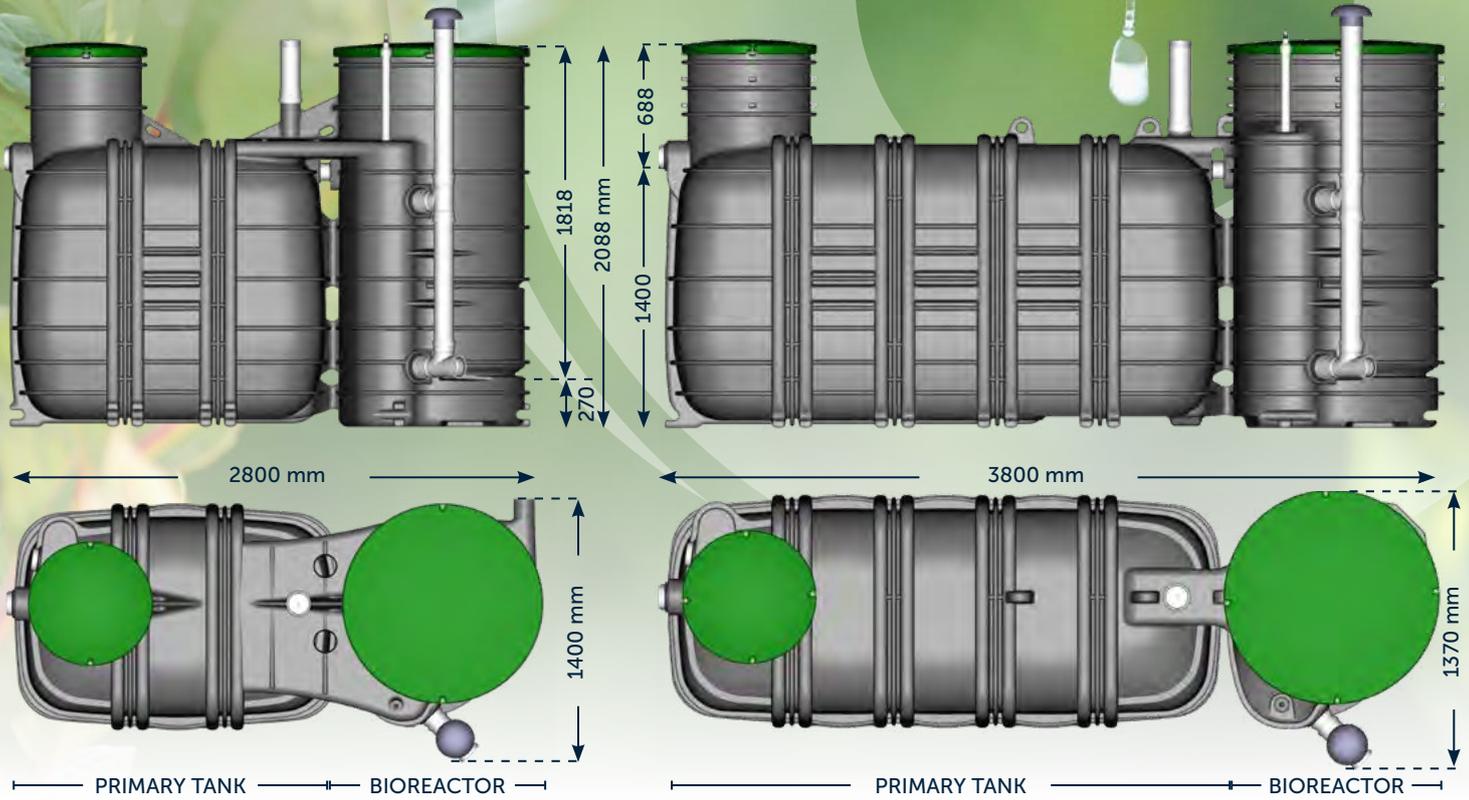
## THE UNIQUE BIOROCK MEDIA

Our **exclusive media** is degradation-resistant, stable, and sustainable - keeping the purification system working effectively over the long-term. You will exclusively find it in BIOROCK systems.



## MONOBLOCK-2

## MONOBLOCK-3



### SAVE MONEY WITH MONOBLOCK

One of the main benefits of having a **MONOBLOCK** sewage treatment plant is that it's a long-term, sustainable, and economic investment. Our system requires minimal maintenance, does not need electricity, and has a long lifespan.

**You will constantly save on electricity, maintenance, and tap water costs as you can reuse the purified water for irrigation.**

### MONOBLOCK SPECIFICATIONS

DIMENSIONS	VOLUME PRIMARY TANK	WEIGHT (EMPTY)
MONOBLOCK-2	2000 liters	298 kg
MONOBLOCK-3	3000 liters	395 kg

**BIOROCK**  
engineered for tomorrow

MONOBLOCK-GLOBAL-03/2023

Call us today for a **FREE** project consultation  
or visit  
[www.biorock.com](http://www.biorock.com)



**CE** BIOROCK units are approved and tested by many International Standards.

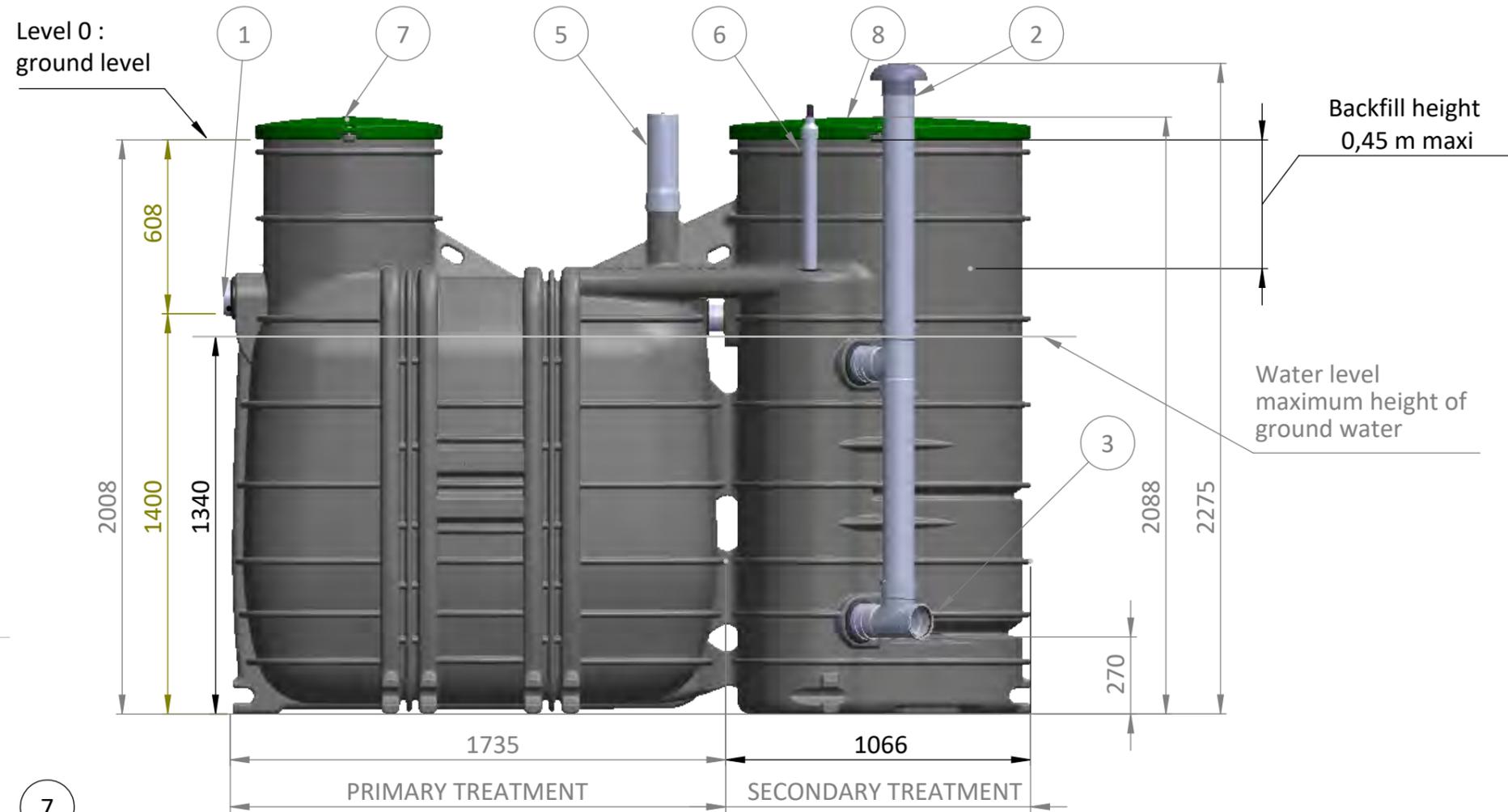


25 Year warranty on tanks  
10 Year warranty on media

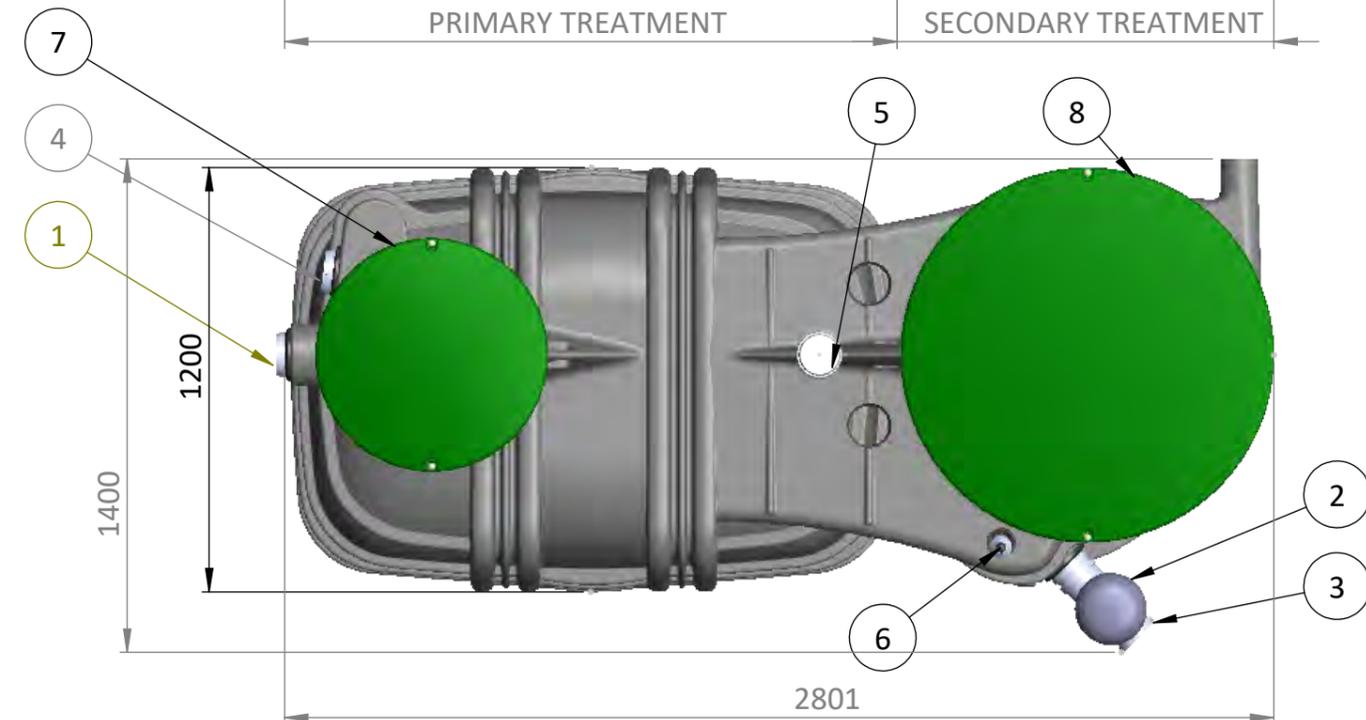
*\*subject to conditions*

# MONOBLOCK-2 V3 Treatment capacity up to 6 PE

Level 0 : ground level



1	Water Inlet
2	Air Inlet
3	Water Outlet
4	Air Outlet
5	Access to effluent filter
6	Overflow Alarm
7	Access to Primary treatment
8	Access to Secondary treatment



CARACTERISTICS	VALUE	UNIT
Capacity in Population Equivalent	up to 6	PE
<b>PRIMARY TREATMENT</b>		
Volume of pre-treatment	2000	Liters
Volume per PE	330	Liters
<b>SECONDARY TREATMENT</b>		
Volume	1500	Liters
Daily volume of wastewater*	150	liters/day/PE
Daily hydraulic load	0.9	m <sup>3</sup> /day
Organic load per PE	60	gr.DBO5/PE/day
Organic load raw effluent up to	0..36	kg DBO5/day
<b>SPECIFICATION</b>		
Overall length	2801	mm
Length x Width Primary treatment	1735 x 1200	mm
Secondary treatment area	0.82	m <sup>2</sup>
Overall width	1400	mm
Overall height + ventilation	2275	mm
Total weight (without water)	298	Kg
Pipe diameters	110	mm
Lid diameter (Primary treatment)	600	mm
Lid diameter (Secondary treatment)	1000	mm

\*according to EN 12566-3

Tolerance : 3%

This primary tank can be installed in high ground water table.

REVISION	DESCRIPTION	Creation		 <b>FT0091-MONOBLOCK-2 V3</b> CM-Y2000.4
		NAME:	LH	
		DATE:	22/09/2022	
		Verification		
NAME:		DATE:		Scale: 1:20
DATE:		Rev: 0	Sheet: 1/1	A3

A the request of **BIOROCK**  
 4-5 Zone d'Activités Économiques  
 Le Triangle Vert  
 L-5691 ELLANGE - LUXEMBOURG

## Synthesis of performances of small wastewater treatment plants MONOBLOCK

Type testing in accordance with the standard EN 12566-3 + A2 (2013) *Small wastewater treatment systems for up to 50 PT — Part 3: Packaged and/or site assembled domestic wastewater treatment plants*

Essential Characteristics	Performances	Type testing report																										
Effectiveness of treatment	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">SWWTP reference</th> <th style="text-align: center;">TREATMENT EFFICIENCY TEST</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">Loads and ratios measured during the nominal sequences (sur 20 results)</td> </tr> <tr> <td style="text-align: center;"><i>CM6</i></td> <td> <b>Mean tested organic daily load:</b>  <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">0,32 kg/d</td> </tr> </table> </td> </tr> <tr> <td style="text-align: center;">Nominal hydraulic daily flow <math>Q_N</math> 0,90 m<sup>3</sup>/d</td> <td> <b>Mean efficiency ratios obtained:</b>  <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">95%</td> </tr> <tr> <td style="text-align: center;"><i>COD</i></td> <td style="text-align: center;">91%</td> </tr> <tr> <td style="text-align: center;"><i>SS</i></td> <td style="text-align: center;">97%</td> </tr> </table> </td> </tr> <tr> <td style="text-align: center;">Nominal organic daily load (<i>BOD<sub>5</sub></i>) 0,36 kg/d</td> <td> <b>Effluent mean concentrations measured:</b>  <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">16 mg/l</td> </tr> <tr> <td style="text-align: center;"><i>COD</i></td> <td style="text-align: center;">78 mg/l</td> </tr> <tr> <td style="text-align: center;"><i>SS</i></td> <td style="text-align: center;">12 mg/l</td> </tr> </table> </td> </tr> <tr> <td></td> <td> <b>Mean electrical power consumption measured:</b> 0 kWh/d  <b>Number of desludging procedure carried out :</b> 1         </td> </tr> </tbody> </table>	SWWTP reference	TREATMENT EFFICIENCY TEST		Loads and ratios measured during the nominal sequences (sur 20 results)	<i>CM6</i>	<b>Mean tested organic daily load:</b> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">0,32 kg/d</td> </tr> </table>	<i>BOD<sub>5</sub></i>	0,32 kg/d	Nominal hydraulic daily flow $Q_N$ 0,90 m <sup>3</sup> /d	<b>Mean efficiency ratios obtained:</b> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">95%</td> </tr> <tr> <td style="text-align: center;"><i>COD</i></td> <td style="text-align: center;">91%</td> </tr> <tr> <td style="text-align: center;"><i>SS</i></td> <td style="text-align: center;">97%</td> </tr> </table>	<i>BOD<sub>5</sub></i>	95%	<i>COD</i>	91%	<i>SS</i>	97%	Nominal organic daily load ( <i>BOD<sub>5</sub></i> ) 0,36 kg/d	<b>Effluent mean concentrations measured:</b> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">16 mg/l</td> </tr> <tr> <td style="text-align: center;"><i>COD</i></td> <td style="text-align: center;">78 mg/l</td> </tr> <tr> <td style="text-align: center;"><i>SS</i></td> <td style="text-align: center;">12 mg/l</td> </tr> </table>	<i>BOD<sub>5</sub></i>	16 mg/l	<i>COD</i>	78 mg/l	<i>SS</i>	12 mg/l		<b>Mean electrical power consumption measured:</b> 0 kWh/d <b>Number of desludging procedure carried out :</b> 1	008002 from 20/04/2017
	SWWTP reference	TREATMENT EFFICIENCY TEST																										
	Loads and ratios measured during the nominal sequences (sur 20 results)																											
<i>CM6</i>	<b>Mean tested organic daily load:</b> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">0,32 kg/d</td> </tr> </table>	<i>BOD<sub>5</sub></i>	0,32 kg/d																									
<i>BOD<sub>5</sub></i>	0,32 kg/d																											
Nominal hydraulic daily flow $Q_N$ 0,90 m <sup>3</sup> /d	<b>Mean efficiency ratios obtained:</b> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">95%</td> </tr> <tr> <td style="text-align: center;"><i>COD</i></td> <td style="text-align: center;">91%</td> </tr> <tr> <td style="text-align: center;"><i>SS</i></td> <td style="text-align: center;">97%</td> </tr> </table>	<i>BOD<sub>5</sub></i>	95%	<i>COD</i>	91%	<i>SS</i>	97%																					
<i>BOD<sub>5</sub></i>	95%																											
<i>COD</i>	91%																											
<i>SS</i>	97%																											
Nominal organic daily load ( <i>BOD<sub>5</sub></i> ) 0,36 kg/d	<b>Effluent mean concentrations measured:</b> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><i>BOD<sub>5</sub></i></td> <td style="text-align: center;">16 mg/l</td> </tr> <tr> <td style="text-align: center;"><i>COD</i></td> <td style="text-align: center;">78 mg/l</td> </tr> <tr> <td style="text-align: center;"><i>SS</i></td> <td style="text-align: center;">12 mg/l</td> </tr> </table>	<i>BOD<sub>5</sub></i>	16 mg/l	<i>COD</i>	78 mg/l	<i>SS</i>	12 mg/l																					
<i>BOD<sub>5</sub></i>	16 mg/l																											
<i>COD</i>	78 mg/l																											
<i>SS</i>	12 mg/l																											
	<b>Mean electrical power consumption measured:</b> 0 kWh/d <b>Number of desludging procedure carried out :</b> 1																											

The tests have been carried out by notify laboratory CERIB (Notify Body n°1164).

This document is a synthesis of the performances of the tested products-type, whose the description and test results are detailed in the type test reports referenced for each performance.

This document only certifies the characteristics of the tested products-type submitted for testing and makes no judgement about the characteristics of similar products.

Épernon, the 12<sup>th</sup> June 2017.

S. POUDEVIGNE

Development & Innovation Manager



/ Centre d'Études et de Recherches de L'Industrie du Béton  
 / 1 rue des Longs Réages - CS 10010 - 28233 ÉPERNON CEDEX - FRANCE  
 / Tél. +33 (0)2 37 18 48 00 / Fax +33 (0)2 37 83 67 39 / e-mail cerib@cerib.com / www.cerib.com

Centre Technique Industriel (loi du 22 juillet 1948) SIRET 775 682 784 00027 - NAF 7219Z. Agréé par le ministère de l'Intérieur (arrêté du 4.04.2011) pour les essais de résistance au feu des éléments de construction. Certificateur de produits (Art. L. 115-27 Code de la consommation), mandaté par AFNOR Certification. Notifié par l'État pour le marquage CE (n° 1164). Opérateur de recherche du Ministère de l'Éducation Nationale, de l'Enseignement Supérieur et de la Recherche, les travaux de R&D éligibles peuvent bénéficier du CIR.