

# Environmental Product Declaration

In accordance with ISO 14025:2006 for:

**PET preform W29/25 - 112 mm - 23,5g - BLUE AIX  
from Novapet S.A.**



Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)





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## General information

**Programa:** The International EPD® System

**Address:** EPD Intenal AB  
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**Website:** [www.environdec.com](http://www.environdec.com)

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**Product Category Rule (PCR):**

Product Category Rules 2019:13 Packaging, version 1.1. Multiple CPC. DATE 2020-12-17. VALID UNTIL: 2023-11-08.

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PCR review was conducted by: The Technical Committee of the International EPD® System.

A full list of members is available at [www.environdec.com](http://www.environdec.com).

Chair of the PCR review: Maurizio Fieschi.

The review panel may be contacted via [info@environdec.com](mailto:info@environdec.com)

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**Life Cycle Analysis (LCA)**

LCA responsible: José Luis Canga Cabañes

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**Independent third-party verification:**

Independent third-party verification of the declaration and data, according to ISO 14025: 2006:

EPD verification by accredited certification body.

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Third party verifier: Maria Feced, Tecnalía R&I Certificación, is an accredited certification body for third-party verification.

Certification body accredited by:

ENAC, accreditation N°. 125/C-PR283

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Procedure for follow-up of data during EPD validity involves third party verifier:

Yes  No

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The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category, but from different programs, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or on fully aligned PCR or PCR versions; considering devices with identical functions, technical performance and use (e.g. declared/functional identical units); have system limits and equivalent data descriptions; apply similar data quality requirements, data collection methods and allocation criteria; apply the same cut-off rules and identical impact assessment methodologies (including the same version of characterization factors); have a similar content of the statement and be in force at the time of comparison.

The environmental impacts of different EPDs can be compared only if all technical information supporting the definition of functional unit/declared as requested by the PCR is considered.





# Company information

## Owner of the EPD & location of production site:

Novapet S.A. (SAMCA Group)

<https://novapet.com/>

Polígono Industrial Valle del Cinca s/n,

Apdo. 62

22300 Barbastro - Huesca (España)

Tel.: (+34) 974 31 60 65

Contact: Dña. Ana Mir

E-mail: [novapet@samca.com](mailto:novapet@samca.com)

## **Description of the organisation:**

Novapet is a company that produces PET focussed on innovation, quality and sustainability, which was founded at the end of the 1990's from the business vision of the SAMCA Group, in a market, that of PET, that was emerging at that time in Spain.

With offices in Zaragoza and Barbastro, Novapet has a productive plant in Barbastro. It has more than 350 employees and a wide presence, both in the national and international areas, providing service in a stable manner to more than 200 clients in 30 countries and on 4 continents.

The formulation and production of different PET resins, with different applications, and their conversion into preforms constitute for us integrated activities to preserve for our clients all the value of our technical innovations.

Under the Novapet resins and concentrates umbrella will continue marketing the resins and concentrates of virgin PET, of the commodity resins as well as the wide range of special resins for sectors increasingly more different from the traditional ones (containers produced by direct injection, or by PET blown extrusion, engineered pieces, etc.), that will allow continued growth of this fully recyclable material in new applications.

Novapet's injection plant is 100% integrated within our productive chain and PET transformation. It is here where our resins acquire value in preform formats, so that our clients can transform them in high-quality containers, capable of preserving their products in optimal conditions. That is key for obtaining a level of quality appropriate for the requirements of our clients and of the market. Quality begins to be generated in the design of our preforms and ends being transformed in our injection plant. Our preforms offer diverse types of mouths which cover the different needs of the current market.

At Novapet we strictly comply with an endless number of quality regulations. For this reason, we are accredited by the highest bodies in the areas of quality management and food safety, environmental management, energy management and corporate social responsibility.

## **Certifications related to the product:**

UNE-EN-ISO 9001: 2015, UNE-EN-ISO 14001:2015, ISO 50001:2018, FSSC 22000V.5 y ECOVADIS.



ecovadis

# Product information

## Product name:

PET preform W29/25 - 112 mm - 23,5g - BLUE AIX.

## Product identification:

This EPD includes the manufacture of preform for PET bottles W29/25 - 112 mm - 23,5g - BLUE AIX.

The intended use of the preform is the production of PET bottles for use as a water container.

## UN CPC Code:

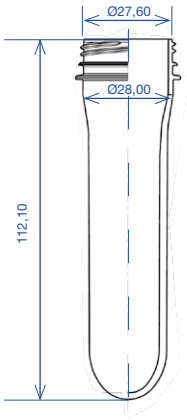
3649 subclass 36490.

## Geographical scope:

Europe.

## Product properties:

The manufacturer declares the following product properties:

NAME	W29/25 - 112 mm - 23,5g - BLUE AIX
	
Preform weight	23,5 g
Preform length	112 mm
Mouth type	Water 29/25
Mouth weight	2,39 g
Stretch length	104,10 mm
Diameter	21,78 mm
Material	NOVAPET CR
Packaging	Paper - PE - PELD - PP - Steel
Tolerancias S/DIN 16901	

The final product is 100% PET.



# LCA information

## Name and contact information of LCA author:

Abaleo S.L.

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(+34) 639 901 043

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## Declared unit:

1 PET preform unit, including distribution packing.

## Time representativeness:

The data used in the LCA are from the year 2020.

## Databases and LCA software used:

Ecoinvent 3.8 database.

Software SimaPro 9.4.0.2.

The following criteria were used to select the most representative processes:

- The data must be representative of the technological development applied in the manufacturing processes. If no information was available, a data representative of an average technology has been chosen.
- Average regionalised data.
- The data should be as up to date as possible.

### System diagram:

All the upstream, core process and downstream stages of the PET preform W29/25 - 112 mm - 23.5g - BLUE AIX production have been studied.

From PET pellet, the PET injection process is performed to obtain preforms, which are used for the subsequent manufacture of PET containers.

The manufacture of preforms begins with the pneumatic transport of the pellet to the dryers, where, by using hot air, the residual moisture contained is eliminated and the pellet is heated.

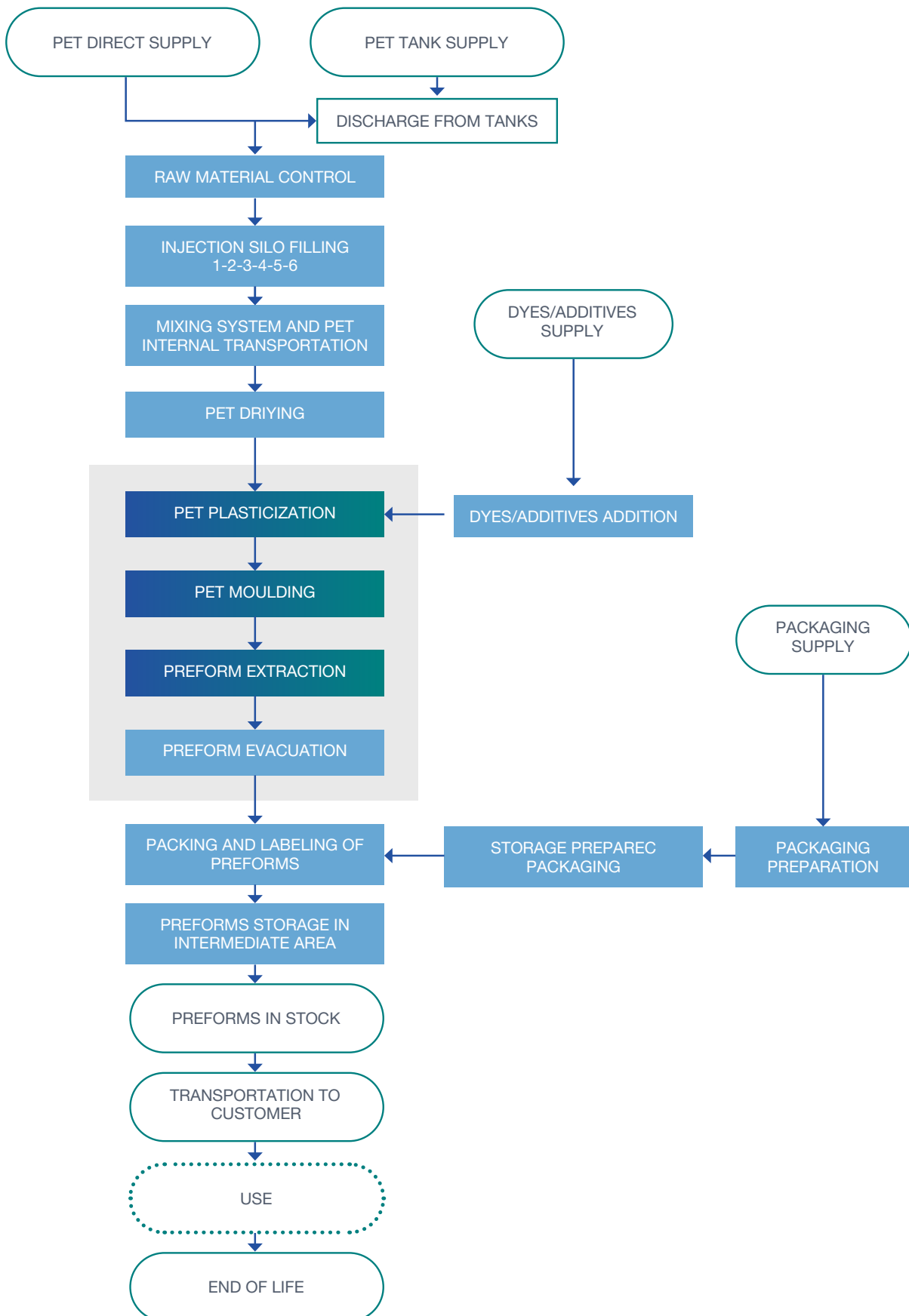
The injector performs the plasticization and intermittent injection of the molten PET into the mold. Once the material has solidified in the various mould cavities, where cooling is thermally controlled, the mold is opened and the preforms are extracted and placed mechanically in a receiver with refrigerated housings for the preforms. The preforms, once finished their cooling, are deposited on the conveyor belt that guides them to their packaging.

The finished and packaged product is stored in the adjacent preform warehouse.

In all cases, the shipment to customer is made with returnable packaging using PP boxes and metal cages.

The system boundaries in the Life Cycle Analysis are shown below in the PET preform production diagram.







## Description of system boundaries:

The EPD is cradle to gate with options and covers upstream, core process and downstream stages.

### **Upstream:**

- Extraction of non-renewable resources used in manufacturing processes.
- Production of renewable resources used in manufacturing processes, its refining or processing and storage.
- Production of the raw material used.
- Production of additives used in manufacturing processes.
- Production of primary and secondary packaging used for the preform.

### **Core process:**

- Production of pellets.
- All material and energy inputs to the core process, including electricity, fuel, compressed air, cooling system, etc.
- The consumption of water.
- The production processes of the energy used in the production of the core process.
- The transport of raw and auxiliary materials to the Novapet plant.
- All emissions to air, water and soil.
- Treatment and transport to management of waste and wastewater generated by all the processes, in the core process.

### **Downstream:**

- Transportation by truck to customers where the final transformation of the bottle is made. The transport data correspond to the expeditions of the year 2020 for the preform studied.
- End of life scenario, considering:
  - 50 km as the distance traveled by truck from the place where the product is used to the waste treatment site.
  - End-of-life management of PET waste. 61% of preform waste is considered to be recycled and the rest to be landfilled, according to European statistics.

The polluter pays principle and the modularity principle have been followed (environmental charges are assigned to the stage where the impact occurs).

The DAP covers the cradle-to-gate with options.

Use of the product is not included.

### **Cut-off criteria:**

In accordance with the PCR criteria, the gross weight/volume of all materials used in the manufacturing process has been included in the LCA, so that at least 99% of the weight of the product unit is considered.

There has been no exclusion of energy consumption.

### **Data quality assessment:**

To assess the quality of the primary data used, the semi-quantitative data quality assessment criteria proposed by the European Union in its Guide to the Environmental Footprint of Products and Organisations were applied, resulting in a Data Quality Rating (DQR) = 1.5, indicating excellent data quality.





# Content declaration

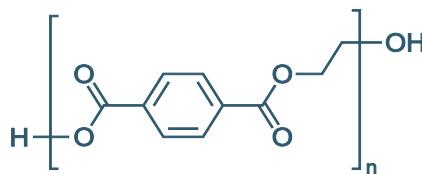
## Product

The preform for which this EPD is written is 100% NOVAPET CR.

The product is 100% PET.

Formulation used in preform manufacture is considered a trade secret and therefore, is confidential information that cannot be made public.

No substances listed in “Candidate List of Substances of Very High Concern (SVHC) for authorisation” are used during the preform cycle production in a percentage greater than 0.1% of the weight of the product.



PET

$(\text{C}_{10}\text{H}_8\text{O}_4)_n$





## Packaging

Primary and secondary packaging for the shipment of the product (distribution packaging), has been included in the study.

Packaging type	kg packaging / declared unit
Paper (label)	7,89E-08
PA	4,33E-07
PE	1,85E-05
LDPE	3,53E-05
Metal container	1,53E-04

## Recycled material

PET preform W29/25 - 112 mm - 23,5g - BLUE AIX do not contain any recycled material.

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## Environmental information

The estimated impact results are relative and do not indicate the final value of the impact categories, nor do they refer to threshold values, safety margins or risks.

The characterisation factors used to convert life cycle inventory data into impact categories are indicated in the GENERAL PROGRAMME INSTRUCTIONS FOR THE INTERNATIONAL EPD. Version 4.0, and in the PCR “Packaging”, have been applied using SimaPro 9.4.0.2 software.

### Potential environmental impacts

PARAMETER		UNIT	Up-stream	Core	Down-stream	TOTAL
Global warming potential (GWP)	Fossil	kg CO <sub>2</sub> eq.	5,58E-02	2,68E-03	2,44E-03	6,09E-02
	Biogenic	kg CO <sub>2</sub> eq.	1,06E-04	5,05E-05	1,49E-07	1,57E-04
	Land use and land use change	kg CO <sub>2</sub> eq.	2,71E-05	1,59E-05	2,06E-08	4,30E-05
	TOTAL	kg CO <sub>2</sub> eq.	5,59E-02	2,75E-03	2,44E-03	6,11E-02
Depletion potential of the stratospheric ozone layer (ODP)		kg CFC 11 eq.	3,45E-07	4,71E-10	5,79E-10	3,46E-07
Acidification potential (AP)		mol H <sup>+</sup> eq.	1,71E-04	1,19E-05	8,64E-06	1,91E-04
Eutrophication potential (EP)	Freshwater	kg P eq.	1,05E-06	3,89E-08	1,26E-09	1,09E-06
	Marine	kg N eq.	3,43E-05	2,71E-06	2,79E-06	3,98E-05
	Terrestrial	mol N eq.	3,28E-04	3,28E-05	3,07E-05	3,92E-04
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	1,51E-04	7,89E-06	8,38E-06	1,67E-04
Abiotic depletion potential (ADP)	Minerals & metals	kg Sb eq.	6,66E-08	3,36E-10	1,06E-10	6,71E-08
	Fossil resources	MJ, net calorific value	1,42E+00	3,96E-02	3,45E-02	1,49E+00
Water depletion potential (WDP)		m <sup>3</sup> eq.	3,22E-02	3,38E-03	-3,17E-06	3,56E-02

## Use of resources

PARAMETER		UNIT	Up-stream	Core	Down-stream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	5,09E-02	2,51E-02	6,09E-05	7,61E-02
	Used as raw materials	MJ, net calorific value	8,63E-03	8,29E-03	1,16E-05	1,69E-02
	TOTAL	MJ, net calorific value	5,95E-02	3,34E-02	7,25E-05	9,30E-02
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	3,68E-02	5,18E-02	3,33E-02	1,22E-01
	Used as raw materials	MJ, net calorific value	1,51E+00	4,25E-02	1,33E-03	1,55E+00
	TOTAL	MJ, net calorific value	1,54E+00	9,44E-02	3,46E-02	1,67E+00
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ, net calorific value	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ, net calorific value	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water		m <sup>3</sup>	8,25E-04	4,36E-05	1,01E-07	8,69E-04

## Waste production and output flows

### Waste production

PARAMETER	UNIT	Up-stream	Core	Down-stream	TOTAL
Hazardous waste disposed	kg	5.32E-07	4.36E-08	9.09E-08	6.67E-07
Non-hazardous waste disposed	kg	9.07E-04	7.45E-05	9.16E-03	1.01E-02
Radioactive waste disposed	kg	1.89E-06	7.94E-07	2.47E-07	2.93E-06

Note: The materials generated during the production process that are considered waste are those sent to landfill for final disposal (materials that are not reused, recycled and/or recovered).

### Output flows

PARAMETER	UNIT	Up-stream	Core	Down-stream	TOTAL
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	5,66E-08	0,00E+00	5,66E-08
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00



## **Other environmental indicators**

Indoor air emissions: The manufacturer declares that the use of PET preform W29/25 - 112 mm - 23,5g - BLUE AIX does not produce indoor air emissions during its service life.

Soil and water emissions: The manufacturer declares that the use of PET preform W29/25 - 112 mm - 23,5g - BLUE AIX does not generate emissions to soil or water during its service life.

## **Additional environmental information**

Novapet is working on the installation of a plant to produce recycled PET resins from flakes from post-consumer PET containers.

Novapet has a self-consumption photovoltaic solar plant that covers around 25% of the plant's needs.

Novapet is a member of the OCS (Operation clean sweep) initiative. It is a global initiative of the plastics sector to prevent the emission to the environment of plastic particles (grain, flakes, dust), which can occur involuntarily at any stage of the plastics value chain: Production, handling, transport, processing and recycling.

The OCS is a voluntary program for responsible management, with the aim of helping to ensure that good cleaning and grain control practices are applied in all operations involving handling plastic pellets, ensuring that there is no leakage into the environment.

Novapet is preparing a project that will reinforce all the activities planned under the OCS program to avoid even in the event of rain overflows the drag of PET resin chips into water.

Novapet has installed a PRC (PET Reprocessing Centre) plant where waste material is shredded and re-entered into the process, thus saving up to 400tons of raw material.



## References

- Product Category Rules 2019:13 Packaging, version 1.1. Multiple CPC. DATE 2020-12-17. VALID UNTIL: 2023-11-08.
- Life Cycle Analysis report for the environmental product declaration of preform W29/25 - 112 mm - 23,5g – BUE AIX of Novapet S.A. (SAMCA group), conducted by Abaleo S.L. February 2023. Version 2.0
- EPD International (2019). General Programme Instructions for the International EPD® System. Version 4.0. Date 2021-03-29, based on ISO 14025 and ISO 14040/14044.
- Environmental databases and impact methodologies implemented using SimaPro 9.4.0.2.
- Standard UNE-EN ISO 14025:2010. Environmental labels and declarations - Type III environmental declarations - Principles and procedures. (ISO 14025:2006).
- Standard UNE-EN ISO 14040:2006/A1:2021. Environmental Management. Life Cycle Analysis. Principles and reference framework. Amendment 1. (ISO 14040:2006/Amd 1:2020).
- Standard UNE-EN ISO 14044:2006/A1:2021. Environmental management. Life cycle assessment. Requirements and guidelines. Amendment 2. (ISO 14044:2006/Amd 2:2020).
- PET market in Europe State of play 2022. Production, collection and recycling. This report, delivered by PRE in partnership with PETCORE Europe, NMWE and UNESDA Soft Drinks Europe. Eunomia.

**VERIFICATION STATEMENT CERTIFICATE**  
**CERTIFICADO DE DECLARACIÓN DE VERIFICACIÓN**

*Certificate No. / Certificado nº: EPD08102*

TECNALIA R&I CERTIFICACION S.L., confirms that independent third-party verification has been conducted of the Environmental Product Declaration (EPD) on behalf of:

TECNALIA R&I CERTIFICACION S.L., confirma que se ha realizado verificación de tercera parte independiente de la Declaración Ambiental de Producto (DAP) en nombre de:

**NOVAPET, S.A. (grupo SAMCA)**  
**Paseo Independencia, 21, 3º**  
**50001 ZARAGOZA - SPAIN**

for the following product(s):  
*para el siguiente(s) producto(s):*

**PET preform W29/25 - 112 mm - 23,5 g - BLUE AIX**  
**Preforma de PET W29/25 - 112 mm - 23,5 g - AZUL AIX**

with registration number **S-P-07872** in the International EPD® System ([www.environdec.com](http://www.environdec.com)).  
*con número de registro S-P-07872 en el Sistema Internacional EPD® ([www.environdec.com](http://www.environdec.com)).*

it's in conformity with:  
*es conforme con:*

- **ISO 14025:2010 Environmental labels and declarations. Type III environmental declarations.**
- **General Programme Instructions for the International EPD® System v.4.0.**
- **PCR 2019:13 Packaging, v.1.1.**
- **UN CPC 34690 Other articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics.**



Carlos Nazabal Alsua  
Manager

Issued date / Fecha de emisión: 23/03/2023  
Update date / Fecha de actualización: 23/03/2023  
Valid until / Válido hasta: 20/03/2028  
Serial Nº / Nº Serie: EPD0810200-E

*This certificate is not valid without its related EPD.  
Este certificado no es válido sin su correspondiente EPD.*

*El presente certificado está sujeto a modificaciones, suspensiones temporales y retiradas por TECNALIA R&I CERTIFICACION.  
This certificate is subject to modifications, temporary suspensions and withdrawals by TECNALIA R&I CERTIFICACION.*

*El estado de vigencia del certificado puede confirmarse mediante consulta en [www.tecnaliacertificacion.com](http://www.tecnaliacertificacion.com).  
The validity of this certificate can be checked through consultation in [www.tecnaliacertificacion.com](http://www.tecnaliacertificacion.com).*







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