

Industrias Mar SAS
TUyCO

Environmental Product Declaration

In accordance with ISO 14025:2006
and EN 15804:2012+A2:2019/AC:2021
for:

HDPE pipes for supply of
drinking water under pressure,
IRAM 13485.
from Industrias Mar S.A.S.

EPD of multiple products, based on the average
results of the product group.

Programme:
The International EPD® System, www.environdec.com

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EPD International AB

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*An EPD should provide current information and may be
updated if conditions change. The stated validity is there-
fore subject to the continued registration and publication
at www.environdec.com*



THE INTERNATIONAL EPD SYSTEM





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1- Programme information

An Environmental Product Declaration, or EPD, is a standardised and verified way of quantifying the **environmental impacts of a product based on a consistent set of rules known as a PCR (Product Category Rules)**. EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison.

Programme:

The International EPD® System
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Third-party verifier: Bárbara María Civit -
 por Universidad Tecnológica Nacional Facultad
 Regional Mendoza

Approved by: The International EPD® System
 Procedure for follow-up of data during EPD validity involves third party verifier:

☒ Yes ☐ No

Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
 Product Category Rules (PCR): PCR 2019:14 Construction products (EN 15804+A2) (version 1.3.4) (1.3.4). UN CPC 369 Other plastics products
 PCR review was conducted by: Martin Erlandsson, IVL Swedish Environmental Research Institute, martin.erlandsson@ivl.se

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Life Cycle Assessment (LCA)

LCA accountability: Ing. Leticia Tuninetti and
 Ing. María Raquel Cavagnaro – INTI Córdoba

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:
☒ EPD verification by individual verifier

2- Company information

Owner of the EPD:

Industrias Mar SAS

Contact:

Marcelo Dario Martinez

Description of the organisation:

TUYCO (Industrias Mar S.A.S.) is an Argentine company based in the city of Córdoba, specialized in manufacturing infrastructure solutions for public utility networks. Its main product line includes high-density polyethylene (HDPE) pipes for water, gas, sewage systems, and cable protection for electrical and telecommunications networks. The company also manufactures metal poles for public lighting.

TUYCO is recognized for its commitment to quality, continuous improvement, and sustainability, incorporating high-tech extrusion processes, in-house laboratory quality control, and responsible resource management. It operates under a Quality Management System based on ISO 9001. With a strong customer focus and dedication to developing safe and efficient infrastructure, TUYCO supplies contractors, government agencies, and private developers throughout Argentina.

Product-related or management system-related certifications

TUYCO's virgin HDPE pipes for potable water are certified according to IRAM 13485, which establishes technical requirements for polyethylene pipes used in pressurized water supply and sewage systems.

Name and location of production site(s):

TUYCO – Industrias Mar S.A.S.
Avenida Velez Sarsfield 6515, Córdoba
Capital, Córdoba, Argentina.

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Product information

This EPD represents an average product based on data from multiple similar products manufactured by TUYCO (Industrias Mar S.A.S.). The polyethylene (PEAD) pipes manufactured by INDUSTRIAS MAR S.A.S. under the TUYCO brand are intended for potable water distribution systems. These products are certified under the IRAM 13485 standard, which ensures compliance with Argentine technical and sanitary requirements for plastic pipes used in drinking water systems.

Produced using virgin high-density polyethylene (PE100), these pipes are designed for pressurized networks and guarantee safe, durable and corrosion-resistant water conveyance. They are available in a wide range of diameters and standard dimension ratios (SDR), according to project demands and installation methods.

Composition and Manufacturing Process
TUYCO PEAD pipes are extruded from virgin PE100 resin, free of recycled content, in compliance with IRAM and ISO standards for potable water applications.

The manufacturing process includes:

Strict selection of certified raw materials (PE100),

Continuous extrusion under controlled temperature and pressure,

Laser and mechanical control of external diameter and wall thickness,

Printing and marking in accordance with IRAM 13485 for traceability and identification.

The process is carried out under a Quality Management System that guarantees traceability, repeatability and product conformity, ensuring a hygienic and safe product for human consumption.

Quality Testing

The PEAD potable water pipes undergo a comprehensive quality assurance protocol based on IRAM 13485 and harmonized ISO methods, including:



Density test (ISO 1183)
Melt flow index test (ISO 1133)
Oxidation induction time (OIT) test (EN 728)
Hydrostatic pressure test (ISO 1167)
Tensile test (ISO 6259)
Dimensional and marking control (ISO 3126, IRAM 13485)
Density test (ISO 1183)
Melt flow index test (ISO 1133)
Oxidation induction time (OIT) test (EN 728)
Hydrostatic pressure test (ISO 1167)
Tensile test (ISO 6259)
Longitudinal reversion (ISO 2505)

These tests ensure mechanical integrity, chemical resistance, thermal stability and compliance with potable water safety criteria.

Applications

TUYCO PEAD pipes certified under IRAM 13485 are intended for use in buried or exposed potable water distribution networks, suitable for urban, rural, and industrial projects. Their corrosion resistance and flexibility make them ideal for long-term performance in diverse environmental conditions, with low maintenance needs and excellent hydraulic performance.

PIPE DIMENSIONS

SDR		26	21	17,6	17	13,6	11	9	
NOMINAL PRESSURE (Kg/Cm)	PE 80	5	6,3	8	9,6	10	12,6	16	
	PE 100	6,3	8	9,6	10	12,6	PN16	PN20	
OUTSIDE DIAMETER (mm)		thickness	thickness	thickness	thickness	thickness	thickness	thickness	length (m)
16								2,0	100
20							2,0	2,3	100
25						2,0			100
32					2,0		3,0	3,6	100
40						3,0	3,7	4,5	100
50					3,0	3,7	4,6	5,6	100
63			3,0		3,8	4,7	5,8	7,1	100
75			3,6		4,5	5,6	6,8	8,4	100
90		3,5	4,3		5,4	6,7	8,2	10,1	100
110		4,2	5,3	6,3	6,6	8,1	10,0	12,3	12
125		4,8	6,0	7,1	7,4	9,2	11,4	14,0	12
140		5,4	6,7	8,0	8,3	10,3	12,7	15,7	12
160		6,2	7,7	9,1	9,5	11,8	14,6	17,9	12
180		6,9	8,6	10,2	10,7	13,3	16,4	20,1	12
200		7,7	9,6	11,4	11,9	14,7	18,2	22,4	12
225		8,6	10,8	12,8	13,4	16,6	20,5	25,2	12

REFERENCES:
SDR: STANDARD DIAMETER RATE

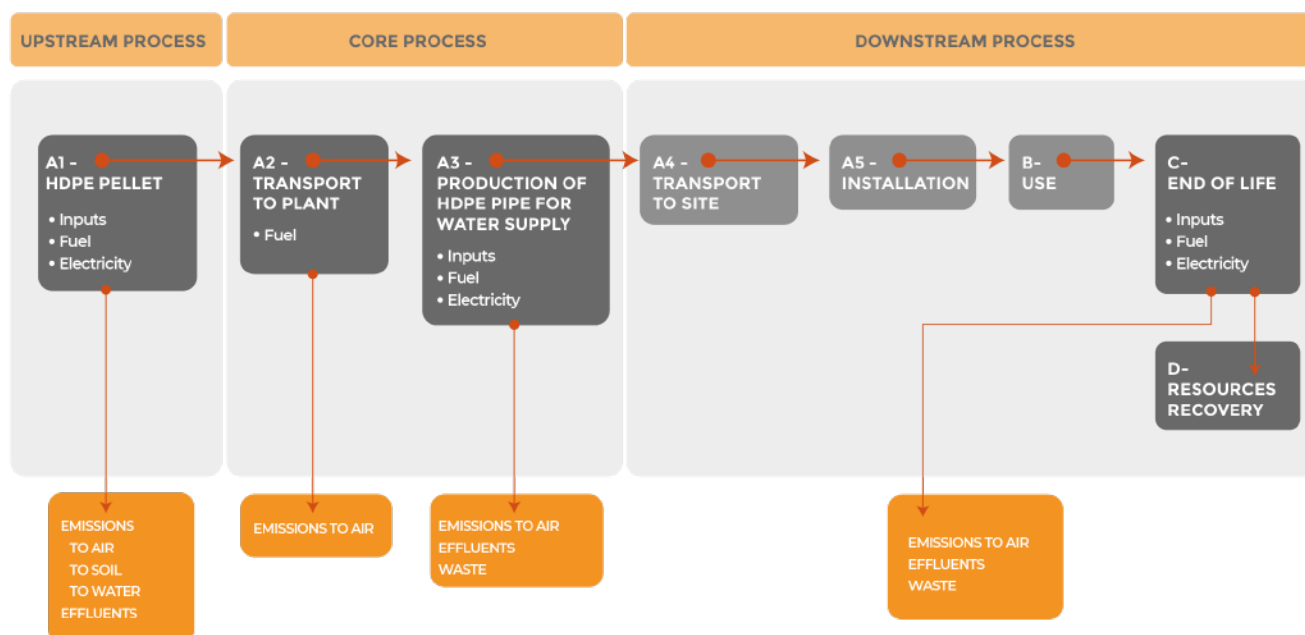
PRODUCTION REFERENCE:

 Coiled tube  Straight tube

4- LCA information

Declared unit:	One kilogram of virgin high density polyethylene HDPE pipe
Reference service life:	50 years
Time representativeness:	The study was carried out with data from the production process for the year 2023.
Database(s) and LCA software used:	SimaPro 9.6.0.1 // Ecoinvent v3.10.1
Description of system boundaries:	a) Cradle to gate with modules C1-C4 and module D (A1-A3 + C + D);

System diagram:



More information:

No environmental allocation was performed, because the processes under study don't generate others products or by-products that require this division.

The scope for the study is **“cradle to gate with module C1-C4, and module D”**; are included all the raw materials extraction or recycled stages (upstream process), industrialization pipes stages (core process) and end of life stage (downstream process). Transport between the stages, and transports of raw material supplies are included too.

Purchased electricity used in the manufacturing process of module A3 accounts for less than 30% of the GWP-GHG results of modules A1-A3.



Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	RER/ROW	AR	AR	-	-	-	-	-	-	-	-	-	AR	AR	AR	AR	AR
Specific data used	>85%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X = Included in LCA
ND = Not Declared

Modules declared description:

The system boundaries include the modules A1-A3, C1, C2, C3, C4 and D provided by the Standard EN 15804 according to an application of type “Cradle to gate with options, modules C1-C4 and module D”. Infrastructure, machinery, buildings, vehicles, and common-use spaces were excluded from the study due to their long useful lives and low contribution to the overall environmental impact. Employee transportation was also excluded, as well as effluent generation, since no liquid discharges were recorded at any stage of the plastic pipe production process.

Module A1:

The full production cycle of high density polyethylene was considered, including resource extraction and transformation into resin. Most of the supply corresponds to material produced in the Europe, with a smaller share coming from Asia. The assessment also includes inputs related to the production of fuels, additives, and packaging materials used throughout the process.

Module A2:

Raw materials are transported to manufacturing sites, with the modelling including road and maritime transportation for each material.

Module A3:

Production involves the manufacturing of virgin HDPE pipes. The plant operates two extrusion lines covering a diameter range from 20 to 250 mm, supporting nominal pressures from 4 to 16 bar. Production begins with the receipt and quality control of raw materials. These are tested in the laboratory to ensure compliance with applicable standards. Once approved, the materials are fed into the extrusion machines, where they are melted and forced through heated dies, forming a plastified preform with a circular cross-section. This preform is then introduced into a calibration device that defines the pipe's final dimensions. Along with a thermal shock using cooled water, the final shape of the pipe is achieved. The pipe then passes through a series of additional machines: some perform laser or mechanical printing on its surface; another grips and pulls the pipe to maintain continuous movement; and finally, a cutting machine defines the length of each section, or, in the case of coils, a winding machine rolls the pipe. The total value of electrical energy consumption was assumed for the production process. The company does not have separate meters between the production plant and the offices, cafeteria, and other spaces. Diesel consumption in the forklift and waste generation were reported for the entire plant. Allocation was based on the plant's total production across all production lines.

Additionally, during the pipe extrusion process, scrap is generated that can be reintegrated into the production line. This material is shredded within the plant and added back into the extrusion process along with purchased pellets. This procedure is not regular; it is carried out only when enough scrap has accumulated to justify operating the shredder. The electricity used by the shredder is already included in the total electricity consumption reported by the plant and therefore is not excluded from the model.

Module C1:

This is considered the most common scenario when a section needs to be replaced or modifications to the network are required. In such cases, the product is removed to be replaced. The emissions are attributed to the construction process of the new system that replaces the previous one.

Module C2:

In accordance with the Federal Recycling Map of Argentina, which includes the location of dumpsites and sanitary landfills, a transport distance of 200 km was assumed from the site where the product is removed and the end of its service life to the final disposal site.

Module C4:

It is disposed of as waste at a landfill.

Module C4:

In Argentina, initiatives for recycling construction waste, such as plastic pipes, are still in their early stages. Despite the potential for recovering these materials, there are currently no known data indicating that such recovery is taking place, and even less information on the extent to which it could be implemented.

5- Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
HDPE pellets PE80 / PE100	9,76E-1	0,0%	0,0%
Masterbatch	2,44E-2	0,0%	0,0%
TOTAL	1,00E+0	0,0%	0,0%
Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Paper label	4,14E-5	0,0%	0,0%
Strapping	1,33E-3	0,0%	0,0%
TOTAL	1,37E-3	0,0%	0,0%

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per declared unit
-	-	-	-

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Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804

Usage of results from A1-A3 without considering the results of module C is not encouraged.

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	2,46E+0	0,00E+0	3,92E-2	1,68E-2	2,70E-3	0,00E+0
GWP-biogenic	kg CO ₂ eq.	7,10E-3	0,00E+0	2,09E-6	2,33E-4	2,85E-7	0,00E+0
GWP-luluc	kg CO ₂ eq.	8,70E-3	0,00E+0	1,34E-6	4,19E-4	1,36E-7	0,00E+0
GWP-total	kg CO ₂ eq.	2,48E+0	0,00E+0	3,92E-2	1,75E-2	2,70E-3	0,00E+0
ODP	kg CFC 11 eq.	2,73E-8	0,00E+0	5,31E-10	6,33E-10	4,02E-11	0,00E+0
AP	mol H ⁺ eq.	9,62E-3	0,00E+0	1,11E-4	2,51E-5	2,51E-5	0,00E+0
EP-freshwater	kg P eq.	2,21E-4	0,00E+0	7,67E-7	2,35E-7	8,07E-8	0,00E+0
EP-marine	kg N eq.	2,03E-3	0,00E+0	4,03E-5	6,51E-6	1,14E-5	0,00E+0
EP-terrestrial	mol N eq.	2,16E-2	0,00E+0	4,27E-4	6,90E-5	1,24E-4	0,00E+0
POCP	kg NMVOC eq.	9,65E-3	0,00E+0	1,55E-4	3,79E-5	3,71E-5	0,00E+0
ADP-minerals&metals*	kg Sb eq.	1,68E-7	0,00E+0	2,31E-9	4,26E-10	1,07E-10	0,00E+0
ADP-fossil*	MJ	8,05E+1	0,00E+0	5,19E-1	3,06E-1	3,47E-2	0,00E+0
WDP*	M3	1,91E+0	0,00E+0	7,35E-4	2,50E-2	4,78E-5	0,00E+0
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption						

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO2 eq	2,48E+0	0,00E+0	3,92E-2	1,75E-2	2,70E-3	0,00E+0

Resource use indicators

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	2,02E+0	0,00E+0	6,74E-4	6,44E-2	7,63E-5	0,00E+0
PERM	MJ	2,54E-1	0,00E+0	8,58E-5	5,80E-5	7,83E-5	0,00E+0
PERT	MJ	2,28E+0	0,00E+0	7,60E-4	6,45E-2	1,55E-4	0,00E+0
PENRE	MJ	8,42E-5	0,00E+0	1,71E-7	2,39E-7	1,23E-7	0,00E+0
PENRM	MJ	8,05E+1	0,00E+0	5,19E-1	3,06E-1	3,47E-2	0,00E+0
PENRT	MJ	8,05E+1	0,00E+0	5,19E-1	3,06E-1	3,47E-2	0,00E+0
SM	kg	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
RSF	MJ	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
NRSF	MJ	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
FW	M3	1,91E+0	0,00E+0	7,35E-4	2,50E-2	4,78E-5	0,00E+0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water						

¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero.

Waste indicators

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
Non-hazardous waste disposed	kg	3,92E-2	0,00E+0	0,00E+0	0,00E+0	1,00E+0	0,00E+0
Radioactive waste disposed	kg	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0

Output flow indicators

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
Material for recycling	kg	2,28E-1	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
Materials for energy recovery	kg	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
Exported energy, electricity	MJ	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
Exported energy, thermal	MJ	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0

7- Additional environmental information

7.1 Proper use instructions:

TUYCO's HDPE pipes made from virgin resin for pressurized potable water distribution must be installed in accordance with national regulations and international standards such as IRAM 13485. Key installation considerations include proper trench excavation, bedding with selected granular material, and uniform backfilling to avoid point loads or deformation.

The use of certified fittings and correct welding or electrofusion techniques is essential to ensure hydraulic tightness and structural integrity. Avoid sharp bending or mechanical stress during handling and laying to preserve pipe performance. Correct installation minimizes the risk of leaks, pipe fatigue, or pressure surges, ensuring long-term operational efficiency and reduced energy consumption in pumping systems.

7.2 Maintenance and service:

HDPE water pipes made from virgin resin require minimal maintenance due to their resistance to corrosion, scaling, and chemical aggression. Preventive maintenance is typically limited to periodic system checks at accessible points (valves, hydrants, chambers), verification of pressure levels, and flushing routines if necessary.

If damage or leakage is detected, affect-

7.3 Durability-related components:

The durability of TUYCO's virgin HDPE pipes is defined by the grade and origin of the resin PE100, pipe wall thickness, extrusion quality, and correct field installation. These pipes are designed and tested to withstand working pressures ranging from 4 to 16 bar.

They are UV-stabilized when required for outdoor storage or exposed use. Under normal conditions, and with proper installation and use, the expected service life exceeds 50 years, making them suitable for long-term infrastructure investment.

7.4 Recycling procedures and benefits:

At the end of their service life, TUYCO's virgin HDPE water pipes can be recycled. The typical process involves mechanical separation from fittings, cutting into smaller sections, and shredding into reprocessible pellets. Recycled material can be reused in non-pressure applications, such as corrugated ducts, sheathing, or secondary pipes. Recycling helps reduce the demand for virgin raw materials, supports circular economy principles, and minimizes environmental burdens associated with landfill disposal.

7.5 Reuse and waste disposal:

Where feasible, removed pipes in good condition may be reused in low-pressure or non-critical infrastructure applications, such as drainage conduits or casing pipes. When reuse is not practical, pipes should be mechanically shredded and disposed of in authorized sanitary landfills. TUYCO's HDPE pipes contain no hazardous additives, ensuring safe disposal. Open-air burning or uncontrolled dumping should be strictly avoided due to environmental risks.

7.6 Minimizing end-of- life impact:

To minimize environmental impact at the end of the product's life, preference should be given to reuse and recycling strategies. Clean pipes should be processed through regional recycling facilities or transported to authorized waste treatment centers. TUYCO supports responsible end-of-life handling and encourages partnerships with municipalities, contractors, and recyclers to promote sustainable decommissioning of infrastructure components.



• **Description of the organisation's overall environmental work:**

TUYCO (Industrias Mar S.A.S.) integrates environmental responsibility into its core business strategy through a continuous improvement approach in manufacturing and resource management. The company operates under a system, which governs all stages of production, from raw material control to finished product testing and traceability.

In terms of environmental practices, TUYCO is committed to:

- Incorporating recycled raw materials into a significant portion of its product line (e.g., tritubes and monotubes made from post-consumer recycled HDPE).
- Reprocessing internal production scrap to reduce waste and improve material efficiency.
- Minimizing electricity consumption by monitoring energy use across all production lines.
- Participating in national initiatives for plastic recycling and circular economy models.
- TUYCO has conducted a full Life Cycle Assessment (LCA) and pursued Environmental Product Declarations (EPDs) as part of its strategy to increase transparency and measure environmental performance under international standards (EN 15804, ISO 14025).
- More information on the company's environmental activities, certifications, and sustainability initiatives can be obtained by contacting:

tecnica@tuyco.com.ar

or visiting the company's official communication channels. TUYCO also maintains cooperation with institutions such as INTI (Instituto Nacional de Tecnología Industrial), CIPC (Cámara de la Industria Plástica de Córdoba) and local recyclers to enhance its environmental footprint.

8- Additional social and economic information

The TUYCO business unit dedicated to the production of virgin HDPE pipes for pressurized potable water distribution operates with a firm commitment to social responsibility and long-term economic sustainability.

Social responsibility:

This business unit promotes responsible industrial development by ensuring high-quality infrastructure products that support public health and access to safe drinking water across Argentina. TUYCO guarantees safe and inclusive working conditions in its production plant, with continuous training programs for staff, equal opportunity hiring, and active monitoring of occupational health and safety.

Although this product line uses virgin resin, the broader organizational context reflects TUYCO's commitment to environmental and social values, including internal material efficiency programs and collaboration with national sustainability initiatives.

Economic sustainability:

The potable water pipe division invests regularly in advanced extrusion technology and quality control systems to meet the most demanding standards of reliability and performance, such as IRAM 13485.

By producing locally, TUYCO strengthens regional supply chains, ensures job creation, and reduces dependency on imported finished goods. This helps maintain price stability and ensures timely delivery for critical infrastructure projects throughout the country. In addition, the company applies long-term procurement strategies for raw materials and engages in responsible supplier selection to ensure continuity and compliance with environmental and technical requirements.

All social and economic practices described are supported by traceable internal records, supplier evaluations, and process monitoring systems that contribute to the transparency and verifiability of this Environmental Product Declaration.

References

General Programme Instructions of the International EPD® System. Version 4.0.

PCR 2019:14. Name. Version

Boulay, A. M., Bare, J., Benini, L., Berger, M., Lathuilliere, M. J., Manzardo, A., . . . Pfister, S. (2017, June 8). The WULCA consensus characterization model for water scarcity footprints: assessing impacts of water consumption based on available water remaining (AWARE). (S. M. Laren, Ed.)
Int. J. Life Cycle Assess, 23 (DOI 10.1007/s 11367 017 1333 8), 368 378.

Dirección Nacional de Cambio Climático. (2020). ¿Qué es el Cambio Climático? Obtenido de Secretaría de Cambio Climático y Desarrollo Sustentable de la Secretaría de Gobierno de Ambiente y Desarrollo Sustentable de la Nación (SAyDS):
<https://www.argentina.gob.ar/ambiente/sustentabilidad/cambioclimatico>

EN 15804. (2021). Sostenibilidad en la Construcción Declaraciones Ambientales de Producto Regla de categoría Básicas para Productos de la Construcción. Erratum Europeo. Madrid.

Goedkoop, M., Heijungs, R., Huijbregts, M., Schryver, A. D., Struijs, J., & van Zelm, R. (2008). ReCiPe. Neatherlands.

ISO 14046. (2014, 08 01). ISO 14046 Environmental management Water footprint - Principles, requeriments and guidelines. Firts Edition, 1-33. Vernier, Ginebra, Switzerland: ISO.

IVL Instituto Sueco de Investigación Ambiental, Secretaría del Sistema Internacional de DAP, CTME, Concrete NZ, Monk Spaces, Aquafil SpA. (2024). PCR 2019:14 En proceso de actualización Productos de construcción (EN 15804+A2) (1.3.4). Obtenido de The EPD Portal:
<https://environdec.com/pcr library/with documents>

Posch, M., Hettelingh, J. P., Johansson, M., Margni, M., & Jolliet, O. (2008). The role of atmospheric dispersion models and ecosystem sensitivity in the determination of characterisation factors for acidifying and eutrophying emissions in LCIA. 477 486.

Seppälä, J., Posch, M., Johansson, M., & Hettelingh, J. P. (2006). Country Dependent Characterisation Factors for Acidification and Terrestrial Eutrophication Based on Accumulated Exceedance as an Impact Category Indicator. Int J LCA, 403 416.

Struijs, J., A. B. e., Jaarsveld, V. H., & Huijbregts, M. A. (2009). Aquatic Eutrophication. Chapter 6.

Van Oers, L., & Guinée, J. (2016). The Abiotic Depletion Potential: Background, Updates, and Future. Obtenido de Resources 2016, 5, 16: <https://doi.org/10.3390/resources5010016>

Zelm, V., Huigbrets, & Hollander, d. (2008). European characterization factors for human health damage of PM10 and ozone in life cycle impact assessment. Journal Atmospheric Environment, 441 453.



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