Environmental
Product
Declaration

According to ISO14025+EN15804 A2 (+indicators A1)

This declaration is for:
HENCO Standard Multilayer Composite pipe

Provided by:
Henco Industries NV

MRPI® registration:
1.1.00854.2025

Program operator:
Stichting MRPI®
Publisher:
Stichting MRPI®
www.mrpi.nl

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COMPANY INFORMATION

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MRPI® REGISTRATION

1.1.00854.2025

DATE OF THIS ISSUE

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EXPIRY DATE

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SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by Niels Jonkers, PLUK sustainability. The LCA study has been done by Mando Kort, Ecochain Technologies B.V.. The certificate is based on an LCA-dossier according to ISO14025+EN15804 A2 (+indicators A1). It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2. Declaration of SVHC that are listed on the 'Candidate list of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

PROGRAM OPERATOR

Stichting MRPI®
Kingsfordweg 151
1043 GR
Amsterdam

PRODUCT

HENCO Standard Multilayer Composite pipe

DECLARED UNIT / FUNCTIONAL UNIT

1 Mass (kg)

DESCRIPTION OF PRODUCT

The STANDARD multilayer composite pipe is a plastic pipe consisting of electronically cross-linked polyethylene and an aluminum core.

VISUAL PRODUCT

MORE INFORMATION

https://www.henco.be/en/COIL%20STANDARD

Ing. L. L. Oosterveen MSc. MBA Managing Director MRPI	DEMONSTRATION OF VERIFICATION
	CEN standard EN15804 serves as the core PCR [1]
	Independent verification of the declaration an data according to ISO14025+EN15804 A2 (+indicators A1) Internal: External: X
	Third party verifier: Niels Jonkers, PLUK sustainability
	[1] PCR = Product Category Rules

DETAILED PRODUCT DESCRIPTION (PART 1)

The HENCO STANDARD MULTI-LAYER COMPOSITE PIPE from Henco Industries NV is a plastic pipe consisting of electronically cross-linked polyethylene and an aluminum core. This type of pipe is sold both in rolls and rods and is available in various diameters. The HENCO STANDARD MULTILAYER pipes are used for both drinking water and heating applications (both high temperature heating (radiators) and low temperature heating (underfloor heating)).

Components Product (>1%)	(kg/%)
High Density Polyethylene	58,60%
Aluminum	36,43%
Vinyl Acetate	3,65%

DETAILED PRODUCT DESCRIPTION (PART 2)

For its packaging of HENCO STANDARD MULTI-LAYER COMPOSITE PIPE, Henco Industries NV puts the focus mainly on the reuse and/or recyclability of the chosen material.

Components Packaging (>1%)	(kg/%)
Plastics	28,91%
Wood	7,95%
Paper, cardboard and adhesive tape	4,47%

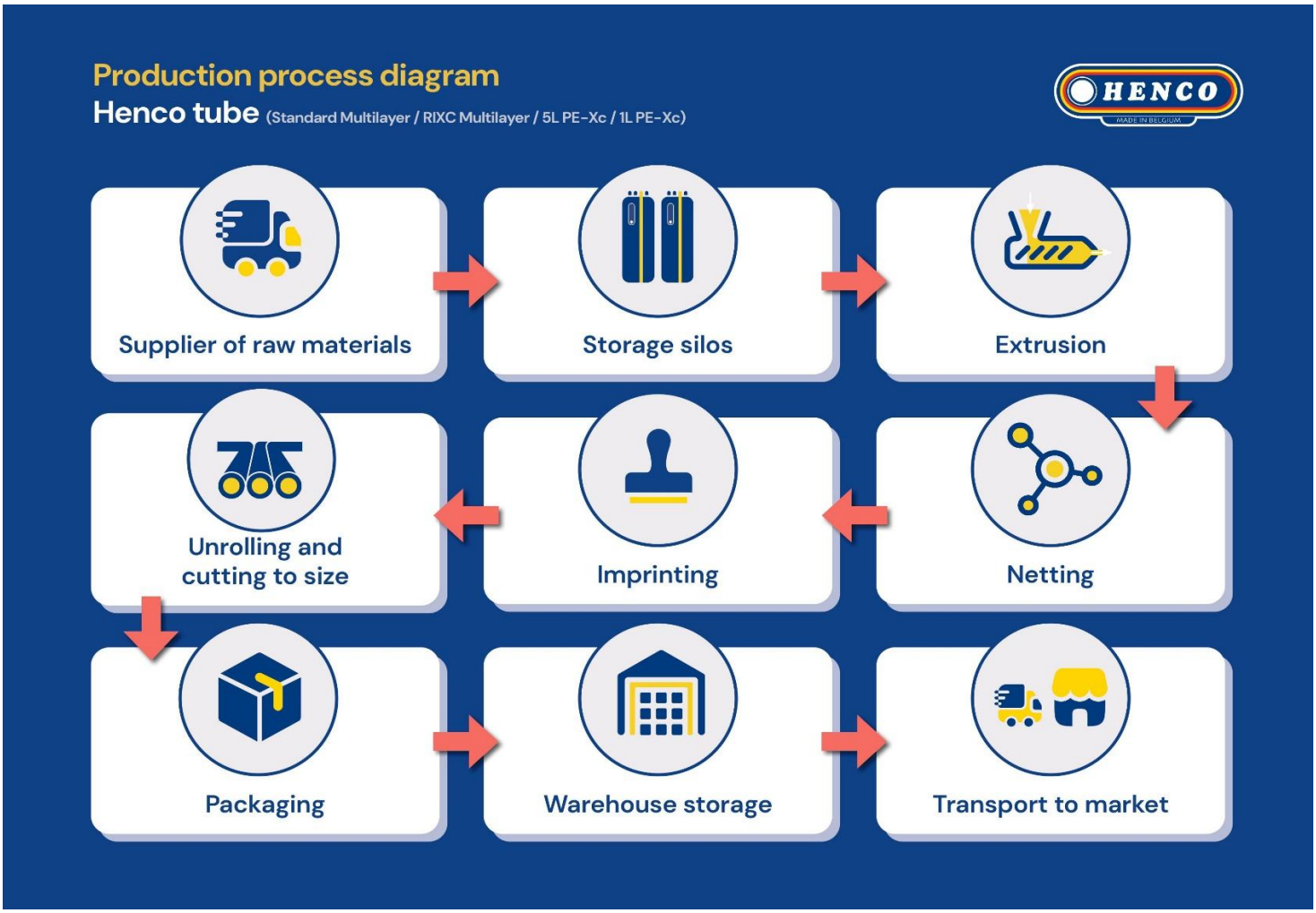
SCOPE AND TYPE

Produced in Belgium, sold in Europe. Based on datasets from Ecoinvent version 3.6, incorporated in Ecochain Helix version 4.3.1. The EPD gives average scores of multiple pipe diameters, all produced by Henco.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport gate to site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse - Recovery - Recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X

X = Modules Assessed

ND = Not Declared



REPRESENTATIVENESS

This LCA is based on an average kg of this type of pipe and represents the different diameters within this pipe type. A sensitivity analysis has shown that these different diameters have no more than the allowable deviation between them, making this average LCA representative for all available diameters. For further analysis, the weight per linear meter of pipe can be multiplied by the 1 kg results from this EPD to calculate the impact per 1m.

ENVIRONMENTAL IMPACT per functional unit or declared unit (indicators A1)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADPE	kg Sb eq.	4.96E-05	3.16E-07	2.29E-06	5.22E-05	5.06E-07	9.06E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3.42E-07	5.64E-07	1.83E-08	-1.29E-06
ADPF	MJ	1.11E+02	1.88E-01	1.99E+01	1.31E+02	3.01E-01	5.86E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.04E-01	3.85E-01	3.64E-02	-2.20E+01
GWP	kg CO2 eq.	6.99E+00	1.21E-02	5.21E-01	7.52E+00	1.98E-02	5.57E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.34E-02	1.67E+00	8.43E-03	-1.44E+00
ODP	kg CFC11 eq.	5.75E-07	2.25E-09	1.51E-07	7.28E-07	3.51E-09	3.81E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.37E-09	3.14E-09	3.03E-10	-1.40E-07
POCP	kg ethene eq.	3.89E-03	7.27E-06	1.08E-04	4.00E-03	1.20E-05	2.09E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8.07E-06	1.64E-05	2.59E-06	-2.97E-04
AP	kg SO2 eq.	3.64E-02	5.22E-05	8.41E-04	3.73E-02	8.71E-05	1.81E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5.88E-05	2.17E-04	1.23E-05	-2.60E-03
EP	kg (PO4) 3 eq.	3.19E-03	1.04E-05	1.56E-04	3.35E-03	1.71E-05	1.20E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.16E-05	7.14E-05	3.34E-06	-2.63E-04

Toxicity indicators and ECI (Dutch market)

HTP	kg DCB eq.	5.20E+00	5.18E-03	1.10E-01	5.31E+00	8.34E-03	1.71E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5.63E-03	6.05E-02	1.06E-03	-3.81E-01
FAETP	kg DCB eq.	6.42E-02	1.52E-04	2.82E-03	6.71E-02	2.43E-04	9.75E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.64E-04	1.89E-02	3.51E-04	-3.00E-03
MAETP	kg DCB eq.	3.01E+02	5.42E-01	8.15E+00	3.10E+02	8.76E-01	2.85E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5.92E-01	2.78E+01	3.92E-01	-1.90E+01
TETP	kg DCB eq.	1.22E-02	1.84E-05	1.68E-03	1.39E-02	2.95E-05	4.21E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.99E-05	9.70E-05	4.09E-06	-8.80E-04
ECI	euro	1,04E+00	1,46E-03	4,24E-02	1,09E+00	2,39E-03	2,83E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,61E-03	9,36E-02	6,55E-04	-1,24E-01
ADPF	kg Sb eq.	6.09E-02	8.90E-05	3.26E-03	6.43E-02	1.46E-04	2.82E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9.84E-05	1.95E-04	1.88E-05	-1.22E-02

ADPE = Abiotic Depletion Potential for non-fossil resources
ADPF = Abiotic Depletion Potential for fossil resources
GWP = Global Warming Potential
ODP = Depletion potential of the stratospheric ozone layer
POCP = Formation potential of tropospheric ozone photochemical oxidants
AP = Acidification Potential of land and water
EP = Eutrophication Potential
HTP = Human Toxicity Potential
FAETP = Fresh water aquatic ecotoxicity potential
MAETP = Marine aquatic ecotoxicity potential
TETP = Terrestrial ecotoxicity potential
ECI = Environmental Cost Indicator
ADPF = Abiotic Depletion Potential for fossil resources

ENVIRONMENTAL IMPACT per functional unit or declared unit (core indicators A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq.	7.01E+00	1.22E-02	5.27E-01	7.55E+00	2.00E-02	5.44E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.35E-02	1.87E+00	9.64E-03	-1.47E+00
GWP-fossil	kg CO2 eq.	7.19E+00	1.22E-02	5.26E-01	7.73E+00	2.00E-02	5.44E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.35E-02	1.67E+00	9.64E-03	-1.46E+00
GWP-biogenic	kg CO2 eq.	-2.02E-01	0.00E+00	0.00E+00	-2.02E-01	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	2.02E-01	0.00E+00	0.00E+00
GWP-luluc	kg CO2 eq.	1.98E-02	4.32E-06	1.17E-03	2.10E-02	7.32E-06	3.13E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4.95E-06	1.38E-05	1.68E-06	-1.31E-03
ODP	kg CFC11 eq.	5.98E-07	2.82E-09	1.05E-07	7.05E-07	4.41E-09	4.30E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.98E-09	3.71E-09	3.72E-10	-1.59E-07
AP	mol H+ eq.	4.32E-02	6.96E-05	1.09E-03	4.43E-02	1.16E-04	2.32E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7.83E-05	2.99E-04	1.56E-05	-3.15E-03
EP-fresh water	kg PO4 eq.	2.39E-04	1.01E-07	1.15E-05	2.51E-04	2.01E-07	2.28E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.36E-07	5.72E-07	6.20E-08	-1.32E-05
EP-marine	kg N eq.	6.57E-03	2.49E-05	2.68E-04	6.87E-03	4.08E-05	5.49E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.76E-05	1.23E-04	7.10E-06	-6.14E-04
EP-terrestrial	mol N eq.	7.30E-02	2.74E-04	3.24E-03	7.65E-02	4.50E-04	5.81E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3.04E-04	1.34E-03	4.70E-05	-6.78E-03
POCP	kg NMVOC eq.	2.36E-02	7.84E-05	8.43E-04	2.46E-02	1.28E-04	2.19E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8.68E-05	3.40E-04	1.55E-05	-2.10E-03
ADP-minerals & metals	kg Sb eq.	4.96E-05	3.16E-07	2.29E-06	5.22E-05	5.06E-07	9.06E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3.42E-07	5.64E-07	1.83E-08	-1.29E-06
ADP-fossil	MJ, net calorific value	1.11E+02	1.88E-01	1.99E+01	1.31E+02	3.01E-01	5.86E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.04E-01	3.85E-01	3.64E-02	-2.20E+01
WDP	m3 world eq. Deprived	2.47E+00	5.75E-04	1.84E-01	2.65E+00	1.08E-03	3.00E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7.28E-04	2.59E-03	1.21E-03	-1.15E-01

GWP-total	=	Global Warming Potential total
GWP-fossil	=	Global Warming Potential fossil fuels
GWP-biogenic	=	Global Warming Potential biogenictotal
GWP-luluc	=	Global Warming Potential land use and land use change
ODP	=	Depletion potential of the stratospheric ozone layer
AP	=	Acidification Potential, Accumulated Exceedence
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 Exceedence
POCP	=	Formation potential of tropospheric ozone photochemical oxidants
ADP-minerals & metals	=	Abiotic Depletion Potential for non-fossil resources [1]
ADP-fossil	=	Abiotic Depletion for fossil resources potential [1]
WDP	=	Water (user) deprivation potential, deprivation-weighted water consumption [1]

Disclaimer [1]:

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

ENVIRONMENTAL IMPACT per functional unit or declared unit (additional indicators A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Disease inci-dence	4.57E-07	1.10E-09	6.79E-09	4.65E-07	1.79E-09	3.51E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.21E-09	2.69E-09	2.42E-10	-2.90E-08
IRP	kBq U235 eq.	1.54E-01	8.20E-04	2.23E-01	3.77E-01	1.26E-03	2.39E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8.53E-04	1.04E-03	1.32E-04	-1.21E-02
ETP-fw	CTUe	1.64E+02	1.52E-01	6.74E+00	1.71E+02	2.69E-01	1.80E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.81E-01	2.22E+00	2.24E+01	-9.94E+00
HTP-c	CTUh	7.98E-09	5.42E-12	1.57E-10	8.14E-09	8.72E-12	1.47E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5.89E-12	7.87E-11	1.72E-12	-5.57E-10
HTP-nc	CTUh	1.53E-07	1.82E-10	3.46E-09	1.57E-07	2.94E-10	1.43E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.98E-10	2.73E-09	5.41E-11	-9.48E-09
SQP	-	3.38E+01	1.60E-01	5.13E+00	3.91E+01	2.61E-01	1.21E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.77E-01	2.92E-01	6.31E-02	-9.58E-01

PM = Potential incidence of disease due to PM emissions

IRP = Potential Human exposure efficiency relative to U235 [1]

ETP-fw = Potential Comparative Toxic Unit for ecosystems [2]

HTP-c = Potential Comparative Toxic Unit for humans, cancer [2]

HTP-nc = Potential Comparative Toxic Unit for humans, non-cancer [2]

SQP = Potential soil quality index [2]

Disclaimer [1]:

- This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste.

Disclaimer [2]:

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

OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 en A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	2.23E-03	4.80E-07	7.73E-06	2.24E-03	7.63E-07	5.78E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5.16E-07	1.21E-04	4.41E-08	-1.00E-05
NHWD	kg	1.14E+00	1.16E-02	5.37E-02	1.20E+00	1.91E-02	9.83E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.29E-02	2.57E-02	1.01E-01	-7.70E-02
RWD	kg	1.54E-04	1.28E-06	1.90E-04	3.45E-04	1.98E-06	2.43E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1.34E-06	1.38E-06	1.76E-07	-1.54E-05
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

HWD = Hazardous Waste Disposed
NHWD = Non Hazardous Waste Disposed
RWD = Radioactive Waste Disposed
CRU = Components for reuse
MFR = Materials for recycling
MER = Materials for energy recovery
EEE = Exported Electrical Energy
ETE = Exported Thermal Energy

RESOURCE USE per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	8.39E+00	3.27E-03	1.77E+00	1.02E+01	3.29E-03	2.24E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.55E-03	1.44E-02	1.20E-03	-2.94E-01
PERM	MJ	2.19E+00	0.00E+00	0.00E+00	2.19E+00	0.00E+00	-2.19E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.06E+01	3.27E-03	1.77E+00	1.24E+01	3.29E-03	4.65E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.55E-03	1.44E-02	1.20E-03	-2.94E-01
PENRE	MJ	8.09E+01	2.42E-01	2.11E+01	1.02E+02	2.79E-01	5.86E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.16E-01	4.23E-01	3.54E-02	-2.27E+01
PENRM	MJ	2.05E+01	0.00E+00	0.00E+00	2.05E+01	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.01E+02	2.42E-01	2.11E+01	1.23E+02	2.79E-01	5.86E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.16E-01	4.23E-01	3.54E-02	-2.27E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NSRF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m3	6.80E-02	2.12E-05	5.67E-03	7.37E-02	3.67E-05	1.55E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2.48E-05	1.69E-04	3.21E-05	-3.19E-03

PERE = Use of renewable 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 resources excluding non-renewable 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 resources
SM = Use of secondary materials
RSF = Use of renewable secondary fuels
NSRF = Use of non-renewable secondary fuels
FW = Use of net fresh water

BIOGENIC CARBON CONTENT per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BBCpr	kg C	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
BCCpa	kg C	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

BCCpr = Biogenic carbon content in product
BCCpa = Biogenic carbon content in packaging

CALCULATION RULES (PART 1)

Technical product information was requested from the manufacturers and the components were modeled based on the technical product information provided by the manufacturers.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 1)

All materials (A1) required to produce the pipe are included, as is the transport distance from the supplier with the relevant means of transportation (A2). All relevant stage A3 production processes, such as potential production losses, have been included in this study. The production of HENCO STANDARD MULTI-LAYER COMPOSITE PIPE is done by extrusion. In the next stage, the HENCO STANDARD MULTI-LAYER COMPOSITE PIPE is cross-linked in the bunker facility. As a final step in the production process, the tubes are cut to the desired length and printed. This final step is done in the unwinding facility. The finished products eventually go to the sales markets. The waste generated during the production process goes to waste treatment.

Material	(kg/%)
High Density Polyethylene	58,60%
Aluminum	36,43%
Vinyl Acetate	3,65%

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 2)

All relevant transport and structures in the construction and installation process were included in this study (A4). Material required for installation and handling of the packaging waste was taken into account (A5). At the construction site, the products must be cut to size. This usually generates more waste. In addition, some of the materials are lost due to damage or weather. It is assumed that 5% of the materials are lost.

Packaging processing at installation	Recycling	Energy recovery	Landfill
Plastics	27%	26%	47%
Paper	75%	10%	15%
Wood	38%	23%	39%
Metal	66%	0%	34%

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 3)

This LCA includes demolition (C1), transport to a waste treatment facility (C2), processes for waste treatment (up to end-of-waste status; C3) and landfill (C4). It is assumed that 10% will be dumped, 85% incinerated and 5% recycled.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 4)

The HENCO STANDARD MULTILAYER COMPOSITE PIPE is a combination of plastic and metal. Separately, these materials are easy to recycle. The technology to separate these materials is currently only available on a small scale. In addition, the standard multi-layer tubes at the end of the life cycle are often also soiled by other building materials, which makes recycling even more difficult. That is why the most important destination is waste incineration with energy recovery. A limited part is also deposited for the reasons stated above.

DECLARATION OF SVHC

None of the substances in the product are on the 'Candidate List of Substances of Very High Concern for Authorization' (SVHC) or exceed the threshold value of the European Chemicals Agency.

REFERENCES

[1] 'ISO 14040: Environmental management - Life cycle assessment – Principles and Framework', International Organization for Standardization, ISO14040:2006.
[2] 'ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines', International Organization for Standardization, ISO14044:2006.
[3] 'ISO 14025: Environmental labels and declarations - Type III environmental declarations - Principles and procedures, International Organization for Standardization', ISO14025:2006.
[4] 'NEN-EN 15804+A2: Duurzaamheid van bouwwerken - Milieuverklaringen van producten - Basisregels voor de productgroep bouwproducten', NEN-EN 15804:2012+A2:2019.
[5] 'Bepalingsmethode Milieuprestatie Bouwwerken', Stichting Nationale Milieudatabase, versie 1.1, maart 2022.
[6] 'NMD-Toetsingsprotocol opname data in de Nationale Milieudatabase, op basis van de Bepalingsmethode Milieuprestatie Bouwwerken', Stichting Nationale Milieudatabase, versie 1.1, maart 2022
[7] Ecochain 3.2.12 web: http://app.Ecochain.com.
[8] De Bruyn, S.M., Korteland, M.H., Markowska, A.Z., Davidson, M.D., De Jong, F.L., Bles, M., Sevenster, M.N. (2010) “Handboek Schaduwprijzen. Waardering en weging van emissies en milieueffecten”, CE Delft.
[9] Van Harmelen, A.K., Korenromp, R.H.J., Ligthart, T.N., Van Leeuwen, S.M.H., Van Gijlswijk, R.N. (2004) “Toxiciteit heeft z’n prijs. Schaduwprijzen voor (eco-)toxiciteit en uitputting van abiotische grondstoffen binnen DuboCalc”, TNO.
[10] TEPPFA, Environmental Product Declaration – Polymer/Al/Polymer Composite Pipe System For Hot And Cold Water In The Building, 2020
[11] Nederlandse Milieu Database, Forfaitaire waarden voor verwerking-scenario’s einde leven behorende bij: Bepalingsmethode Milieuprestatie Bouwwerken, versie mei 2022