

ENVIRONMENTAL PRODUCT DECLARATION

PE PIPES

In accordance with ISO 14025 and EN 15804:2012+A2:2019



by **alixis**

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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

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General Information

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 from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Declaration owner



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CEN standard EN 15804 served as the core PCR

PCR:	Construction products, PCR 2019:14, 1.11 and UN CPC 369
PCR prepared by:	IVL Swedish Environmental Research Institute Moderator: Martin Erlandsson, martin.erlandsson@ivl.se
Independent external verification of the declaration and data, according to ISO 14025:2010	EPD process certification (Internal) EPD verification (External)
Accredited or approved by	The Australasian EPD® Programme
Procedure for follow-up of data during EPD validity involves third party verifier:	No

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

Company information

For over 45 years, RXP has been providing rural water expertise for New Zealand and global rural markets. RXP manufactures and distributes a wide range of uPVC and polyethylene products including pipe, injection mould fittings and rotational moulded tanks, troughs and irrigation products.

With local manufacturing sites employing over 140 local people, the vast majority of the products we sell are proudly New Zealand made.

Belonging to the Aliaxis group has also provided RXP with access to thousands of new products around the world.

Bureau Veritas is the body that certifies the compliance of RXP NZ to the following management systems:

- ISO 9001 – Quality Management Systems
- ISO 14001- Environmental Management Systems

To demonstrate compliance to New Zealand product standards, Marley NZ distributes PE pipes with “S” Mark Product Certification

- Polyethylene (PE) pipes for pressure applications - AS/NZS 4130
License No: 2804 (Ashburton) and 2807 (Horotiu)
- Conduit systems for cable management – Part 21: Particular requirements – rigid conduit systems – AS/NZS 61386.21
License No: 2806
- Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications -AS/NZS 5065
License No: 2854



Product information

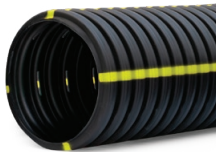
Table 1 - Product characteristics of PE pipes

PRODUCT CHARACTERISTICS	
Product names/Application	Polyethylene (PE) pipes covered in this EPD are: <ul style="list-style-type: none"> - Polyethylene (PE) non-pressure pipes <ul style="list-style-type: none"> - Land drainage - Telecom and power duct - Polyethylene (PE) pressure pipes <ul style="list-style-type: none"> - Effluent - Water supply - Irrigation
UN CPC Code	369 – Other plastic products
Density	925 -960 kg/m ³
Yield tensile strength	12 - 25MPa
Coefficient of linear thermal expansion	10 x 10 ⁻⁵ / °C
Melting Point	125 - 133 °C
Poissons ratio	0.4
Stifness modulus	250 - 1100 MPa



Table 2. PE products included in EPD

PRODUCT SERIES	RXP'S PRODUCTS
PE non-pressure pipe	
DA110	Land drainage – Drainflo®
DA160	Land drainage – Drainflo®
DA65	Land drainage – Drainflo®
DAFS	Land drainage – Drainflo®
DAFW	Land drainage – Drainflo®
MDED	Irrigation/water supply
EDCP	Irrigation/water supply
PE100GJ	Telecom
PE100OJ	Electrical
500	Land drainage Drainflo®
Comducts	Telecom



DA110 Drainflo®



DA160 Drainflo®



MDED Irrigation



EDCP Irrigation



PE100GJ Telecom



PE100OJ Electrical

Table 2. PE products included in EPD continued

PE non-pressure pipe	
K Pipe	Irrigation – Low density Polyethylene Pipe
LAT	Irrigation – Lateral Polyethylene Pipe
LD	Irrigation – Low density Polyethylene Pipe
MDBL	Irrigation – Water supply
MDEF	Effluent
MDID	Irrigation / Pressure
PE100	Irrigation / Pressure
PE100BL	Water supply
PE100BS	Irrigation / Pressure
PE100CS	Sewer Mains



K Pipe Irrigation



LAT Irrigation



LD Irrigation



MDBL Irrigation



MDEF Effluent



MDID Irrigation



PE100 Irrigation



PE100BL Water Supply



PE100CS Sewer Mains

Table 3 - Content declaration for representative PE non pressure pipes

Product components	PE non pressure pipes	PE pressure pipes	CAS No.
Polyethylene Resin	x	x	25213-02-9, 25087-34-7, 9002-88-4
Carbon black	x	x	1333-86-4
Pigments	x	x	Various
Packaging materials			
Synthetic Twine	x	x	
Softwood	x	x	
PET Strapping	x	x	

Product life cycle overview

The life cycle of a building product is divided into three process modules according to the General Program Instructions (GPI) and four information modules according to ISO 21930 and EN 15804 and supplemented by an optional information module on potential loads and benefits beyond the building life cycle. Table 4 shows the system boundary and scope of the EPD. The scope of this EPD Cradle to gate with module C1–C4, module D and optional modules A4–A5. Due to the durability of PE pressure pipes, and lack of planned or required maintenance throughout the service life, modules B1–B7 were also deemed not relevant (of negligible impact).

Table 4 - Scope of assessment and system boundary

	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	De-construction 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	x	x	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	X					
Geography	Global/NZ	NZ	NZ	NZ	NZ								NZ	NZ	NZ	NZ	NZ					

X = module included in EPD

MND= Module not declared (does not indicate zero impact result)

System diagram

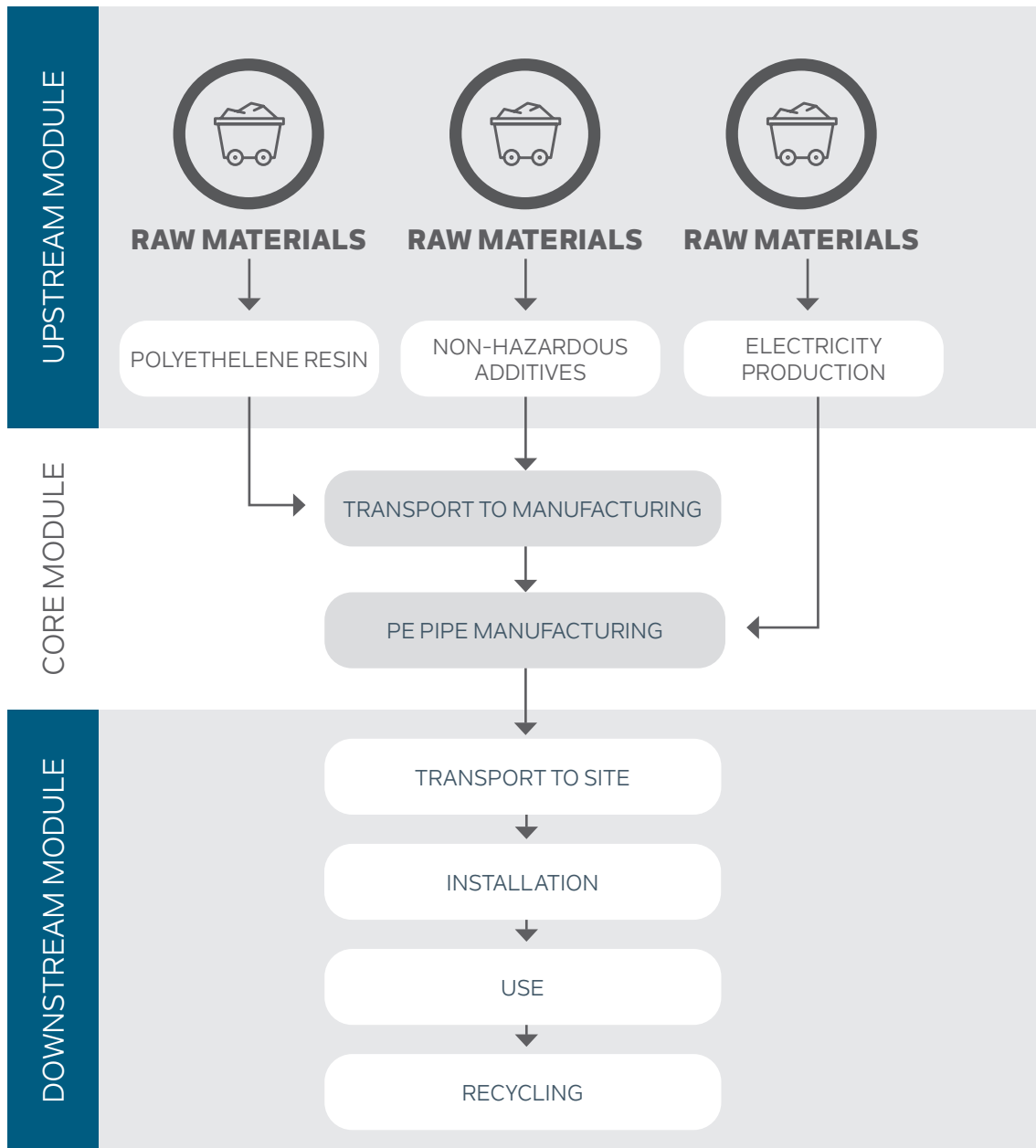


Figure 1. Life Cycle diagram PE pipe production

Manufacturing Stage

RXP PE pipes are manufactured in three sites: Manurewa, Tinwald and Horotiu.

Marley PE pipes are produced using extrusion technology and process that is sophisticated and highly controlled. The PE resin is the main ingredient in the PE pipe feed mix, and is manufactured typically in Europe, Middle East and Asia.

The PE raw material is compounded into pellet form containing precise amounts of polymer, lubricants, stabilisers, anti oxidants and pigments for the specific end product application by the raw material supplier and to ensure optimised processing. Internal PE pipe scrap from production can also be fed back into the feed mix to minimise wastage.

The PE compound is preheated to remove moisture and volatiles and is conveyed to the extruder using a controlled rate feeder. The extruder consists of a single screw configuration which melts and conveys the PE material along the length of the extruder barrel.

Various zones exist along the length of the screw and act to melt, mix, de-gas and compresses the PE compound. External electrical heater bands along the barrel, together with the frictional heat generated as the PE material passes through the gaps between barrel and screw provide the energy needed to fully melt the PE compound materials. The total heat input is carefully controlled to ensure full melting of the PE without degrading the material.

After passing through a mixing zone at the tip of the extruder, the PE melt then feeds into a head and die combination, where the melt is formed into the size of pipe required. Once the molten PE pipe form leaves the die, it enters the sizing system, where it is initially cooled to the required dimensions, the pipe surfaces are cooled with refrigerated water sprays whilst in contact with precision machined sizing sleeves.

The initially cooled pipe is then progressively passed through a series of water spray cooling tanks to reduce the PE material to ambient temperature, and to finalise the pipe dimensions. The pipe information of size, material, class, and batch data required is then marked on the pipe by an in-line printer. The completed pipe is then cut to standard or required length by an in-line saw.

Finally, PE straights are packaged with a softwood timber frame and PET strapping and PE coils with synthetic twine.

Distribution Stage

RXP distributes to New Zealand's major markets. Figures for this stage were calculated with a weighted average based on volume production in each manufacturing sites and the distribution centres for each of the different products.

Installation Stage

Marley PE non pressure pipes are mainly used for land drainage and telco/electrical.

Direct drilling is the most common way of installing the Calibre® Duct pipes which are mainly installed below ground, they normally utilize butt fusion jointing which is carried out above ground and after cooling, long lengths of pipe are snaked into the trench. As such, it results in long continuous lengths of pipeline that can take advantage of trenchless installation techniques.

The Drainflo® corrugated drainage range still requires cover and bedding. Depending on the diameter of the Drainflo pipe, the installation and equipment will be different. Pipes with a DN 110 or below will be installed using a compact track loader and if the DN is bigger than a 110 then a mechanical excavator will be used.

Marley PE pressure pipes are installed following similar parameters to PVC pipes but depending on the final use some pipes are hand dug or installed above ground (smaller DN's). The equipment used for the installation of the pipes will depend directly on their DN, if DN is up to 110mm then a compact track loader is used, if DN is above 110 then a mechanical excavator is used.

Use Stage

Maintenance of pipe systems is not required and not planned as deterioration of the pipe in service is not a consideration. These systems are designed with a life expectancy of in excess of 100 years. Replacements and/or repairs are rarely required on PE pipelines and almost entirely due to third party interference.

There there's no release of dangerous substances to indoor air, soil and water during the use stage.

End of life Stage

The vast majority of PE pipes are installed underground and are assumed to remain underground at end of life. The PE pipes are inert and there is no incentive to dig them up to send for waste treatment.



Figure 2. RXP PE pipe manufacturing sites and showing modules related to the EPD



Life Cycle Assessment Methodology

This section includes the main details of the LCA study as well as assumptions and methods of the assessment. A summary of the key life cycle assessment parameters is given in Table 8.

Life cycle impact assessment methods used: based on EN 15804 +A2

Table 5 - Details of LCA

Declared unit	1 kg of installed pipe
Geographical coverage	New Zealand
LCA scope	Cradle to gate with module C1–C4, module D and optional modules A4–A5
Reference service life	100 years - While the design life of the PE pipe is in excess of 100 years, the duration of the pipe use in buildings will be less for buildings with a shorter lifetime

Life cycle thinking is a core concept in sustainable consumption and production for policy and business. Upstream and downstream consequences of decisions must be taken into account to help avoid the shifting of burdens from one type of environmental impact to another, from one political region to another, or from one stage to another in a product's life cycle from the cradle to the grave.

LCA is the compilation of the inputs, outputs and environmental impacts of a product system throughout its life cycle. It is a technique that enables industries to identify the resource flows and environmental impacts (such as greenhouse gas emissions, water and energy use) associated with the provision of products and services.

According to EN 15804, EPDs of construction products may not be comparable if they do not comply with this standard, and EPDs might not be comparable, particularly if different functional units are used.

Core data collection

Life cycle data has been sourced from material quantity data and production process data from:

- RXP's reporting systems and staff
- RXP feed mix suppliers
- Core manufacturing data was collected directly from RXP manufacturing sites. Electricity consumption was allocated to pipe via mass of pipe produced.

Background data

Generic background data was sourced for raw materials in the upstream module, transportation and end of life waste treatment. Background data was adapted to represent RXP PE pipe product as accurately as possible.

Database(s) and LCA software used:

The inventory data for the process are entered into the SimaPro (v9.1.1.1) LCA software program and linked to the pre-existing data for the upstream feedstocks and services selected in order of preference from:

- Life cycle inventory ecoinvent 3.5, adapted where relevant to New Zealand conditions (energy sources, transport distances and modes and so on, and documented to show how the data is adapted for national relevance).
- The Australasian Unit Process LCI compiled by Life Cycle Strategies (Life Cycle Strategies, 2015).
- Other sources with sensitivity analysis reported to show the significance of this data for the results and conclusions drawn.

All background data used was less than 10 years old.

Data quality and validation

Edge Environment has used the following criteria in selecting data for modelling:

- **Relevance:** select sources, data, and methods appropriate to assessing the chosen product's LCI,
- **Completeness:** include all LCI items that provide a material's contribution to a product's life cycle emissions,
- **Consistency:** enable meaningful comparisons in life cycle impact assessment (LCIA) information,
- **Accuracy:** reduce bias and uncertainty as far as is practical,
- **Transparency:** when communicating, disclose enough information to allow third parties to make decisions,
- **Time coverage:** the data collected represents recent practice for the construction of the project, and
- **Geographical coverage:** the data collected are representative of the sourcing of materials, whether from Australia or overseas, and are in line with the goal of the study.

The data requirements and quality assessment for the LCA are summarised in the table below.

Cut-off rules

According to the PCR 2019:14, Life cycle inventory data shall according to EN 15804 A2 include a minimum of 95% of total inflows (mass and energy) per module. Inflows not included in the LCA shall be documented in the EPD. In accordance with the PCR 2019:14, the following system boundaries are applied to manufacturing equipment and employees:

- Environmental impact from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process are not accounted for in the LCI. Capital equipment and buildings typically account for less than a few percent of nearly all LCIs and this is usually smaller than the error in the inventory data itself. For this project, it is assumed that capital equipment makes a negligible contribution to the impacts as per Frischknecht et al. (2007) with no further investigation.
- Personnel-related impacts, such as transportation to and from work, are also not accounted for in the LCI. The impacts of employees are also excluded from inventory impacts on the basis that if they were not employed for this production or service function, they would be employed for another. It is very hard to decide what proportion of the impacts from their whole lives should count towards their employment. For this project, the impacts of employees are excluded.

Allocation

Allocation was carried out in accordance with the PCR (EPD International, 2019), section 4.5. No-allocation between co-products in the core module as there were no co-products created during manufacturing. Energy consumed in core module was allocated to pipe via mass of pipe produced.





PE Pipe Environmental Performance

Environmental Indicators

The potential environmental impacts used in this EPD are explained in Table 6

Table 6 - Environmental indicators used in the EPD

	Impact category	Abbreviation	Unit	Definition
Environmental impacts	Global warming potential - Fossil	GWP - F	kg CO ₂ eq.	Estimates GHG warming effect for fossil, given as kgCO ₂ -eq.
	Global warming potential - Biogenic	GWP - B	kg CO ₂ eq.	Estimates GHG warming effect for biogenic, given as kgCO ₂ -eq.
	Global warming potential - Land use and Land use change	GWP - Luluc	kg CO ₂ eq.	Estimates GHG warming effect for land use and land use change, given as kgCO ₂ -eq.
	Global warming potential - Total	GWP - T	kg CO ₂ eq.	Estimates the total GHG warming effect, given as kgCO ₂ -eq.
	Ozone depletion potential	ODP	kg CFC 11 eq.	Estimates the potential reduction of ozone in Earth's atmosphere as per CFC-11 eq effects.
	Acidification potential	AP	mol H ⁺ eq.	Estimates the increase of oceans acidity as per SO ₂ eq effects.
	Eutrophication, freshwater	EP - F	kg PO ₄ ³⁻ eq.	Estimates the potential increment of nutrients in freshwater as kg PO ₄ effects.
	Eutrophication, freshwater	EP - F2	kg P eq.	Estimates the potential increment of nutrients in freshwater as kg P equivalent effects.
	Eutrophication, marine	EP - M	kg N eq.	Estimates the potential increment of nutrients in marine water as kg N equivalent effects.
	Eutrophication, terrestrial	EP - T	mol N eq.	Estimates the potential increment of nutrients in land as mol N equivalent effects.
	Photochemical ozone formation	POCP	kg NMVOC eq.	Estimates photochemical smog (air pollution) potential as kg C2H4 eq
	Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	Estimates the impact on minerals reserves as antimony (Sb) equivalents
	Abiotic depletion potential - Fossil	ADP - F	MJ	Estimates the impact on fossil fuels reserves as MJ
	Water depletion Potential	WDP	m ³ eq.	Estimates the potential of water deprivation, to either humans or ecosystems, and serves in calculating the impact score of water consumption at midpoint in LCA or to calculate a water scarcity footprint as per ISO 14046.

Table 6 - Environmental indicators used in the EPD continued

	Impact category	Abbreviation	Unit	Definition
Resource use	Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	Estimates the use of renewable primary energy excluding renewable primary energy resources used as raw materials
	Use of renewable primary energy resources used as raw materials	PERM	MJ	Estimates the use of renewable primary energy resources used as raw materials
	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PERT	MJ	Estimates the total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)
	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	Estimates the use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials
	Use of non- renewable primary energy resources used as raw materials	PENRM	MJ	Estimates the use of non- renewable primary energy resources used as raw materials
	Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PENRT	MJ	Estimates the total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)
	Use of secondary material	SM	kg	Estimates the use of secondary material
	Use of renewable secondary fuels	RSF	MJ	Estimates the use of renewable secondary fuels
	Use of non-renewable secondary fuels	NRSF	MJ	Estimates the use of non-renewable secondary fuels
	Use of net fresh water	FW	m ³	Estimates the use of net fresh water
Waste	Hazardous waste disposed	HWD	kg	Estimates the hazardous waste disposed
	Non-hazardous waste disposed	NHWD	kg	Estimates the non-hazardous waste disposed
	Radioactive waste disposed/stored	RWD	kg	Estimates the radioactive waste disposed/stored

Table 6 - Environmental indicators used in the EPD continued

	Impact category	Abbreviation	Unit	Definition
Output flows	Components for re-use	CFR	kg	Estimates the components for re-use
	Material for recycling	MFR	kg	Estimates the material for recycling
	Materials for energy recovery	MFEE	kg	Estimates the materials for energy recovery
	Exported energy, electricity	EE - e	MJ	Estimates the exported energy, electricity
	Exported energy, thermal	EE - t	MJ	Estimates the exported energy, thermal
Additional environmental impact indicators	Global warming potential, excluding biogenic uptake, emissions and storage	GWP - GHG	kg CO ₂ eq. (GWP100)	Estimates GHG warming effect for a change in a 100 years time, given as CO ₂ -eq.
	Particulate matter	PM	disease incidence	Estimates the potential incidence of disease due to PM emissions
	Ionising radiation - human health	IRP	kBq U-235 eq	Estimates the potential health damages related to the man-made routine releases of radioactive material to the environment
	Eco-toxicity, freshwater	ETP - fw	CTUe	Estimates the potential impact on fresh water ecosystems, as a result of emissions of toxic substances to air, water and soil.
	Human toxicity potential - cancer effects	HTP - c	CTUh	Estimates the potential Comparative Toxic Unit for humans - cancer
	Human toxicity potential - non cancer effects	HTP - nc	CTUh	Estimates the potential Comparative Toxic Unit for humans - non cancer
	Soil quality	SQP	dimensionless	Estimates the potential soil quality index (SQP)

Results: Environmental information

The following section provides the environmental impact results produced by the LCA. Results are not presented as a weighted average nor the impacts of representative products were used due to the results variation being greater than ±10%.

Only the results of the most representative products of each product category are presented in this section of the report. The results for all remaining products can be found in the appendix A.

Two different installation processes are presented for PE non pressure to cater for the different applications: communication and electrical pipes are usually installed trenchless through horizontal directional drilling, whereas the rest are usually installed in open trenches.

The total impact is the sum of the following parts:

- Value shown in A1-3
- Value of module A4
- A5: value of the column (for the correspondent installation type) where the range of the DN is included divided by the weight of the product due to this value being presented per metre of pipe installed.
- C1-4: The four columns correspondent to module C (C1-C4)
- The value of column Module D

EPD Results - PE non-pressure

Results for modules A1-4, C-D

Table 7. Results for 1 kg of Series DA110

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.70E+00	7.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.00E-02	1.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.52E-03	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.72E+00	7.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.40E-07	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.34E-02	5.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.37E-03	8.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.73E-04	5.58E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.65E-03	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.83E-02	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	7.81E-03	5.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.54E-05	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.83E+01	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.50E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.78E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.78E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.40E+01	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.89E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.23E+02	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.42E-02	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.69E-05	2.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.55E-01	5.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.72E-05	7.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.56E+00	7.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	7.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	9.93E-02	5.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.12E+01	9.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.57E-10	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential -non cancer effects	CTUh	1.95E-08	1.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.05E+00	7.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	1.20E-04



Results for modules A5

Table 8 and Table 9 show the results (A5) for PE non-pressure pipes ranges 15-250 installed with an open trench and directional drilling, respectively.

Table 8. EPD Results for 1m of installed PE non-pressure pipe in open trench DN 15-250

			DN and DN range (mm)									
Indicator	Unit	20	40	63	90	110	125	140	160	180	250	
		15-25	32-40	50-65	90	110	125	140	160	180	250	
Environmental impacts	GWP-fossil	kg CO ₂ eq.	9.87E-01	1.31E+00	1.74E+00	2.28E+00	2.16E+00	2.64E+00	3.01E+00	3.55E+00	4.33E+00	7.19E+00
	GWP-biogenic	kg CO ₂ eq.	2.69E-03	5.58E-03	9.98E-03	1.54E-02	1.84E-02	2.38E-02	2.61E-02	2.95E-02	3.86E-02	6.77E-02
	GWP-luluc	kg CO ₂ eq.	2.56E-04	5.34E-04	8.85E-04	1.33E-03	1.68E-03	1.98E-03	2.27E-03	2.67E-03	3.13E-03	4.87E-03
	GWP-total	kg CO ₂ eq.	9.90E-01	1.31E+00	1.75E+00	2.29E+00	2.18E+00	2.66E+00	3.04E+00	3.58E+00	4.37E+00	7.27E+00
	ODP	kg CFC 11 eq.	4.73E-08	9.85E-08	1.63E-07	2.46E-07	3.10E-07	3.66E-07	4.18E-07	4.92E-07	5.78E-07	9.04E-07
	AP	mol H ⁺ eq.	8.16E-03	1.04E-02	1.32E-02	1.69E-02	1.52E-02	1.83E-02	2.11E-02	2.51E-02	3.01E-02	4.93E-02
	EP-freshwater	kg PO ₄ ³⁻ eq.	1.37E-03	1.87E-03	2.56E-03	3.44E-03	3.38E-03	4.17E-03	4.72E-03	5.52E-03	6.82E-03	1.15E-02
	EP-freshwater	kg P eq.	8.17E-05	1.70E-04	2.98E-04	4.58E-04	5.54E-04	7.01E-04	7.76E-04	8.86E-04	1.13E-03	1.93E-03
	EP-marine	kg N eq.	3.27E-03	3.93E-03	4.78E-03	5.85E-03	4.78E-03	5.73E-03	6.65E-03	7.98E-03	9.54E-03	1.57E-02
	EP-terrestrial	mol N eq.	3.59E-02	4.34E-02	5.29E-02	6.49E-02	5.35E-02	6.40E-02	7.43E-02	8.92E-02	1.06E-01	1.74E-01
	POCP	kg NMVOC eq.	9.23E-03	1.10E-02	1.33E-02	1.61E-02	1.29E-02	1.55E-02	1.80E-02	2.17E-02	2.59E-02	4.27E-02
	ADP-minerals & metals*	kg Sb eq.	1.96E-06	4.07E-06	7.39E-06	1.15E-05	1.36E-05	1.79E-05	1.94E-05	2.18E-05	2.91E-05	5.21E-05
	ADP-fossil*	MJ	4.59E+00	9.29E+00	1.55E+01	2.34E+01	2.89E+01	3.48E+01	3.94E+01	4.60E+01	5.54E+01	8.92E+01
	WDP	m ³	5.75E-01	8.13E-01	1.11E+00	1.50E+00	1.54E+00	1.82E+00	2.10E+00	2.49E+00	2.95E+00	4.70E+00
	Resource use	PERE	MJ	2.09E-01	4.29E-01	1.66E+00	3.01E+00	2.47E+00	5.68E+00	5.01E+00	4.35E+00	1.01E+01
PERM		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT		MJ	2.09E-01	4.29E-01	1.66E+00	3.01E+00	2.47E+00	5.68E+00	5.01E+00	4.35E+00	1.01E+01	2.55E+01
PENRE		MJ	4.86E+00	9.85E+00	1.65E+01	2.49E+01	3.07E+01	3.70E+01	4.19E+01	4.89E+01	5.89E+01	9.51E+01
PENRM		MJ	3.20E-02	3.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT		MJ	4.89E+00	9.88E+00	1.65E+01	2.49E+01	3.07E+01	3.70E+01	4.19E+01	4.89E+01	5.89E+01	9.51E+01
SM		kg	0.00E+00	1.00E+00	2.00E+00	3.00E+00	4.00E+00	5.00E+00	6.00E+00	7.00E+00	8.00E+00	9.00E+00
RSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW		m ³	3.14E-03	6.49E-03	1.07E-02	1.61E-02	2.03E-02	2.39E-02	2.74E-02	3.22E-02	3.78E-02	5.91E-02
Waste	Hazardous waste disposed	kg	1.50E-05	3.12E-05	5.19E-05	7.83E-05	9.85E-05	1.16E-04	1.33E-04	1.56E-04	1.84E-04	2.89E-04
	Non-hazardous waste disposed	kg	1.61E-01	3.35E-01	5.58E-01	8.42E-01	1.06E+00	1.25E+00	1.43E+00	1.68E+00	1.98E+00	3.13E+00
	Radioactive waste disposed	kg	2.55E-05	5.32E-05	8.79E-05	1.32E-04	1.67E-04	1.96E-04	2.25E-04	2.65E-04	3.09E-04	4.78E-04

		DN and DN range (mm)										
Indicator	Unit	20	40	63	90	110	125	140	160	180	250	
		15-25	32-40	50-65	90	110	125	140	160	180	250	
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional environmental impacts	GWP - GHG	kg CO ₂ eq.	9.73E-01	1.29E+00	1.71E+00	2.24E+00	2.12E+00	2.59E+00	2.96E+00	3.48E+00	4.25E+00	7.06E+00
	Particulate matter	disease incidence	4.97E-08	8.69E-08	1.47E-07	2.35E-07	2.21E-07	3.84E-07	3.74E-07	3.73E-07	6.61E-07	1.46E-06
	Ionising radiation - human health	kBq U-235 eq	3.95E-02	8.23E-02	1.36E-01	2.05E-01	2.59E-01	3.03E-01	3.48E-01	4.11E-01	4.78E-01	7.40E-01
	Eco-toxicity (freshwater)	CTUe	2.12E+01	2.60E+01	3.31E+01	4.19E+01	3.49E+01	4.48E+01	5.03E+01	5.84E+01	7.53E+01	1.33E+02
	Human toxicity potential - cancer effects	CTUh	5.59E-10	1.07E-09	2.07E-09	3.66E-09	2.94E-09	6.72E-09	5.95E-09	5.18E-09	1.20E-08	3.02E-08
	Human toxicity potential - non cancer effects	CTUh	1.40E-08	1.91E-08	2.61E-08	3.50E-08	3.42E-08	4.23E-08	4.79E-08	5.59E-08	6.94E-08	1.17E-07
	Soil quality	dimensionless	5.15E+00	1.07E+01	1.77E+01	2.66E+01	3.35E+01	3.93E+01	4.51E+01	5.32E+01	6.21E+01	9.64E+01



Table 9. EPD Results for 1m of installed PE non-pressure pipe with directional drilling DN 15-250

DN 90 is used as the representative DN of the range 15-180 as it provides the average results from the results from the different DN's in the range. Results in the range do not vary more than 1.2%.

DN and DN range (mm)				
Indicator	Unit	90	250	A5
		15-180	250	
Environmental impacts	GWP-fossil	kg CO ₂ eq.	5.63E+00	6.26E+00
	GWP-biogenic	kg CO ₂ eq.	1.82E-03	1.83E-02
	GWP-luluc	kg CO ₂ eq.	9.53E-06	1.05E-04
	GWP-total	kg CO ₂ eq.	5.63E+00	6.28E+00
	ODP	kg CFC 11 eq.	3.15E-09	2.68E-08
	AP	mol H ⁺ eq.	4.95E-02	5.17E-02
	EP-freshwater	kg PO ₄ ³⁻ eq.	7.37E-03	8.71E-03
	EP-freshwater	kg P eq.	4.22E-05	4.27E-04
	EP-marine	kg N eq.	2.15E-02	2.19E-02
	EP-terrestrial	mol N eq.	2.34E-01	2.38E-01
	POCP	kg NMVOC eq.	6.12E-02	6.22E-02
	ADP-minerals&metals*	kg Sb eq.	1.55E-06	1.60E-05
	ADP-fossil*	MJ	2.79E+00	1.03E+01
	WDP	m ³	2.88E+00	2.98E+00
	Resource use	PERE	MJ	2.00E+00
PERM		MJ	0.00E+00	0.00E+00
PERT		MJ	2.00E+00	2.18E+01
PENRE		MJ	2.88E+00	1.12E+01
PENRM		MJ	0.00E+00	0.00E+00
PENRT		MJ	2.88E+00	1.12E+01
SM		kg	3.00E+00	9.00E+00
RSF		MJ	0.00E+00	0.00E+00
NRSF		MJ	0.00E+00	0.00E+00
FW		m ³	5.30E-04	2.03E-03
Waste	Hazardous waste disposed	kg	1.54E-06	1.14E-05
	Non-hazardous waste disposed	kg	2.15E-02	1.60E-01
	Radioactive waste disposed	kg	2.89E-07	3.14E-06

DN and DN range (mm)				
Indicator	Unit	90	250	
		15-180	250	
		A5		
Output flows	Components for re-use	kg	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00
	Exported energy, electricity	MJ	0.00E+00	0.00E+00
	Exported energy, thermal	MJ	0.00E+00	0.00E+00
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	5.56E+00	6.17E+00
	Particulate matter	disease incidence	2.26E-07	1.11E-06
	Ionising radiation - human health	kBq U-235 eq	5.12E-04	5.25E-03
	Eco-toxicity (freshwater)	CTUe	1.38E+02	1.62E+02
	Human toxicity potential - cancer effects	CTUh	3.39E-09	2.66E-08
	Human toxicity potential - non cancer effects	CTUh	7.60E-08	9.08E-08
	Soil quality	dimensionless	4.55E-01	1.61E+00



EPD Results - PE Pressure

Results for modules A1-4, C-D

Table 10. EPD results for 1kg of product Series LD – Low Density Polyethylene Pipe

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.79E+00	4.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	7.73E-03	1.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.52E-03	1.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.80E+00	4.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.25E-07	1.04E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.30E-02	3.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.89E-03	5.81E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	6.07E-04	4.02E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.61E-03	1.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.76E-02	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.19E-02	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.48E-05	1.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.92E+01	7.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.81E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	4.51E+00	7.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	4.51E+00	7.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.49E+01	7.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.24E+02	7.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.79E-02	3.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.52E-05	1.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.58E-01	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.71E-05	4.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

Indicator		Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.64E+00	4.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.05E-07	4.75E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.30E-01	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.53E+01	6.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.51E-10	2.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.20E-08	7.49E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	7.01E+00	4.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Indicator		Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	5.72E-04



Results for modules A5

Table 11 EPD Results for 1m of installed PE pressure pipe, product ranges DN13-630

		DN and DN range (mm)												
Indicator	Unit	16	32	50	63	75	90	125	180	250	355	500	630	
		13-20	25-40	45-57	63	75	90	110-140	160-200	225-280	315-400	450-560	630	
Environmental impacts	GWP-fossil	kg CO ₂ eq.	3.72E-04	1.31E-03	1.49E+00	1.73E+00	1.96E+00	2.26E+00	1.02E+01	1.21E+01	1.43E+01	1.74E+01	2.55E+01	3.11E+01
	GWP-biogenic	kg CO ₂ eq.	4.32E-07	1.52E-06	7.11E-03	9.19E-03	1.12E-02	1.38E-02	5.35E-02	6.42E-02	7.51E-02	8.92E-02	1.29E-01	1.55E-01
	GWP-luluc	kg CO ₂ eq.	2.56E-08	8.86E-08	6.81E-04	8.81E-04	1.07E-03	1.32E-03	5.13E-03	6.15E-03	7.20E-03	8.54E-03	1.23E-02	1.49E-02
	GWP-total	kg CO ₂ eq.	3.73E-04	1.32E-03	1.50E+00	1.74E+00	1.97E+00	2.28E+00	1.02E+01	1.22E+01	1.44E+01	1.75E+01	2.56E+01	3.13E+01
	ODP	kg CFC 11 eq.	6.16E-12	2.17E-11	1.26E-07	1.62E-07	1.98E-07	2.44E-07	9.46E-07	1.13E-06	1.33E-06	1.58E-06	2.27E-06	2.75E-06
	AP	mol H ⁺ eq.	3.20E-07	1.11E-06	1.17E-02	1.33E-02	1.49E-02	1.70E-02	7.82E-02	9.31E-02	1.10E-01	1.34E-01	1.96E-01	2.40E-01
	EP-freshwater	kg PO ₄ ³⁻ eq.	1.48E-07	5.22E-07	2.16E-03	2.53E-03	2.89E-03	3.36E-03	1.48E-02	1.77E-02	2.08E-02	2.53E-02	3.68E-02	4.49E-02
	EP-freshwater	kg P eq.	7.95E-09	2.74E-08	2.16E-04	2.80E-04	3.41E-04	4.20E-04	1.63E-03	1.95E-03	2.28E-03	2.71E-03	3.91E-03	4.73E-03
	EP-marine	kg N eq.	3.01E-07	1.06E-06	4.34E-03	4.85E-03	5.33E-03	5.98E-03	2.85E-02	3.39E-02	4.00E-02	4.92E-02	7.20E-02	8.83E-02
	EP-terrestrial	mol N eq.	1.19E-06	4.20E-06	4.79E-02	5.36E-02	5.91E-02	6.63E-02	3.15E-01	3.75E-01	4.42E-01	5.44E-01	7.96E-01	9.76E-01
	POCP	kg NMVOC eq.	5.78E-07	2.04E-06	1.21E-02	1.35E-02	1.48E-02	1.65E-02	7.92E-02	9.41E-02	1.11E-01	1.37E-01	2.00E-01	2.46E-01
	ADP-minerals & metals*	kg Sb eq.	2.01E-10	6.83E-10	5.19E-06	6.70E-06	8.16E-06	1.01E-05	3.90E-05	4.68E-05	5.48E-05	6.50E-05	9.38E-05	1.13E-04
	ADP-fossil*	MJ	3.77E-04	1.18E-03	1.18E+01	1.52E+01	1.84E+01	2.27E+01	8.83E+01	1.06E+02	1.24E+02	1.47E+02	2.13E+02	2.57E+02
	WDP	m ³	2.45E-04	8.66E-04	9.46E-01	1.12E+00	1.29E+00	1.51E+00	6.57E+00	7.84E+00	9.24E+00	1.12E+01	1.64E+01	1.99E+01
	Resource use	PERE	MJ	2.52E-05	8.76E-05	5.45E-01	7.03E-01	8.56E-01	1.05E+00	4.10E+00	4.91E+00	5.75E+00	6.83E+00	9.86E+00
PERM		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT		MJ	2.52E-05	8.76E-05	5.45E-01	7.03E-01	8.56E-01	1.05E+00	4.10E+00	4.91E+00	5.75E+00	6.83E+00	9.86E+00	1.19E+01
PENRE		MJ	4.02E-04	1.26E-03	1.25E+01	1.61E+01	1.95E+01	2.41E+01	9.37E+01	1.12E+02	1.31E+02	1.56E+02	2.25E+02	2.72E+02
PENRM		MJ	3.20E-02	3.20E-02	3.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT		MJ	3.24E-02	3.33E-02	1.25E+01	1.61E+01	1.95E+01	2.41E+01	9.37E+01	1.12E+02	1.31E+02	1.56E+02	2.25E+02	2.72E+02
SM		kg	0.00E+00	1.00E+00	2.00E+00	3.00E+00	4.00E+00	5.00E+00	6.00E+00	7.00E+00	8.00E+00	9.00E+00	1.00E+01	1.10E+01
RSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW		m ³	3.45E-06	1.22E-05	8.28E-03	1.07E-02	1.30E-02	1.61E-02	6.22E-02	7.47E-02	8.77E-02	1.05E-01	1.51E-01	1.82E-01
Waste	Hazardous waste disposed	kg	6.38E-10	2.24E-09	3.98E-05	5.15E-05	6.27E-05	7.74E-05	3.00E-04	3.60E-04	4.21E-04	4.99E-04	7.20E-04	8.70E-04
	Non-hazardous waste disposed	kg	5.02E-05	1.78E-04	4.27E-01	5.51E-01	6.72E-01	8.29E-01	3.21E+00	3.85E+00	4.51E+00	5.36E+00	7.74E+00	9.34E+00
	Radioactive waste disposed	kg	1.68E-09	5.90E-09	6.79E-05	8.78E-05	1.07E-04	1.32E-04	5.11E-04	6.13E-04	7.17E-04	8.51E-04	1.23E-03	1.48E-03

			DN and DN range (mm)											
Indicator	Unit	16	32	50	63	75	90	125	180	250	355	500	630	
		13-20	25-40	45-57	63	75	90	110-140	160-200	225-280	315-400	450-560	630	
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Additional environmental impacts	GWP-fossil	kg CO ₂ eq.	3.43E-04	1.21E-03	1.47E+00	1.70E+00	1.93E+00	2.23E+00	9.99E+00	1.19E+01	1.40E+01	1.71E+01	2.50E+01	3.06E+01
	Particulate matter	disease incidence	4.32E-09	1.53E-08	1.17E-07	1.56E-07	1.91E-07	2.42E-07	8.21E-07	1.15E-06	1.66E-06	2.60E-06	4.32E-06	4.92E-06
	Ionising radiation - human health	kBq U-235 eq	2.08E-06	7.24E-06	1.05E-01	1.36E-01	1.65E-01	2.04E-01	7.91E-01	9.49E-01	1.11E+00	1.32E+00	1.90E+00	2.29E+00
	Eco-toxicity (freshwater)	CTUe	2.05E-02	7.25E-02	2.90E+01	3.27E+01	3.62E+01	4.09E+01	1.92E+02	2.29E+02	2.71E+02	3.35E+02	4.93E+02	6.02E+02
	Human toxicity potential - cancer effects	CTUh	1.13E-10	4.01E-10	1.62E-09	2.29E-09	2.88E-09	3.81E-09	1.11E-08	1.75E-08	2.88E-08	5.05E-08	8.76E-08	9.79E-08
	Human toxicity potential - non cancer effects	CTUh	2.21E-11	7.84E-11	2.21E-08	2.59E-08	2.96E-08	3.45E-08	1.52E-07	1.81E-07	2.15E-07	2.64E-07	3.88E-07	4.71E-07
	Soil quality	dimensionless	3.64E-04	1.28E-03	1.36E+01	1.76E+01	2.14E+01	2.65E+01	1.03E+02	1.23E+02	1.44E+02	1.71E+02	2.46E+02	2.98E+02



Interpretation of LCA results

The majority of environmental impact lies within the raw material supplied to RXP manufacturing sites – comparatively little impact is caused by the PE pipe manufacturing at RXP sites. From the feed mix ingredients, PE resin is responsible for the majority of all environmental impacts and use of resources, although additives were still found to have a significant impact.

Sensitivity analysis

Manufacturing location

As the pipes covered in this study are manufactured in different locations with varying electricity intensities and water consumption, the maximum differences between sites was assessed for each product. However, a weighted average was deemed appropriate as the purpose of this EPD is to represent the average RXP PVC pipe product supplied.

Inputs for each product were allocated based on the weight of pipes produced in each site and calculated as a weighted average of the different manufacturing sites where each type of pipe is produced.

The background LCA report tested the variation in results between manufacturing locations to assess whether an average of the manufacturing sites can be applied without justification (it's necessary to ensure that the variation in the GWP- GHG impact between sites isn't higher than 10% in modules A1-A3). It was found that none of them differ in more than 10%. This EPD is representative of the average production and is less susceptible to variation when production volumes alter.





Additional Environmental Information



See meridian.co.nz/certified

Meridian's Energy Certified Renewable Energy Programme

Globally Aliaxis has a goal to reach 100% renewable electricity by 2025 to help reduce the CO² emissions by 75% per tonne of production on its sites. Aligned with that goal, Marley has joined Meridian Energy's Certified Renewable Energy programme. Meridian is committed to only generating electricity from 100% renewable sources.

Meridian's Certified Renewable Energy product allows Marley to purchase renewable energy certificates to verify that the amount of electricity Marley use from the grid is matched on an annual basis with electricity produced from Meridian's certified hydro stations and wind farms. Committing to this programme enables Marley to report our Scope 2 electricity emissions as zero, using the market-based reporting methodology as per the GHG Protocol's Scope 2 Standards.

Additional environmental work

- Use of Post Industrial and Consumer Recycled Material: In certain product applications RXP is using recycled material from industrial and consumer sources. Clean offcuts are delivered to our site for Marley to reprocess and use in the pipe manufacture. RXP also uses post-consumer recycled material that is sourced and recycled locally in certain product ranges.
- Collecting PE Pipe Offcuts for Recycling – As well as offering a drop off service for taking clean pipe offcuts for recycling Marley has also been working with Waste Management New Zealand to offer a single stream collection service for uPVC and HDPE pipe offcuts. This service is steadily expanding across several different regional centres





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Appendix

Appendix A - Additional EPD Results

PE non pressure

EPD Results for 1kg of Series DA160

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.71E+00	7.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.03E-02	1.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.52E-03	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.72E+00	7.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.40E-07	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.34E-02	5.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.39E-03	8.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.77E-04	5.58E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.66E-03	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.84E-02	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	7.83E-03	5.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.54E-05	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.84E+01	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.50E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	4.13E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	4.13E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.41E+01	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.89E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.23E+02	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.42E-02	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Waste	Hazardous waste disposed	kg	1.70E-05	2.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.55E-01	5.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.71E-05	7.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.56E+00	7.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	7.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	9.92E-02	5.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.14E+01	9.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.58E-10	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.96E-08	1.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.06E+00	7.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	4.18E-04

EPD Results for 1kg of Series DA65

Indicator		Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.71E+00	7.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.11E-02	1.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.47E-03	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.73E+00	7.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.40E-07	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.35E-02	5.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.43E-03	8.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.89E-04	5.58E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.67E-03	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.86E-02	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	7.88E-03	5.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.55E-05	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.87E+01	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.48E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.10E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.10E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.44E+01	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.88E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.23E+02	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.40E-02	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.71E-05	2.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.55E-01	5.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.68E-05	7.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.56E+00	7.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	7.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	9.88E-02	5.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.20E+01	9.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.61E-10	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.97E-08	1.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.08E+00	7.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	2.17E-03

EPD Results for 1kg of Series DAFS

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.72E+00	7.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.10E-02	1.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.52E-03	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.74E+00	7.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.40E-07	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.35E-02	5.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.44E-03	8.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.90E-04	5.58E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.68E-03	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.87E-02	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	7.89E-03	5.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.56E-05	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.88E+01	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.48E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.05E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.05E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.45E+01	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.89E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.23E+02	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.41E-02	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.71E-05	2.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.55E-01	5.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.69E-05	7.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.57E+00	7.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	7.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	9.90E-02	5.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.20E+01	9.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.62E-10	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.97E-08	1.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.09E+00	7.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	2.08E-04

EPD Results for 1kg of Series DAFW

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.71E+00	7.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.04E-02	1.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.53E-03	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.72E+00	7.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.40E-07	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.34E-02	5.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.39E-03	8.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.79E-04	5.58E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.66E-03	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.85E-02	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	7.84E-03	5.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.54E-05	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.85E+01	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.50E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	4.21E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	4.21E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.42E+01	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.89E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.23E+02	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.42E-02	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.70E-05	2.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.55E-01	5.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.71E-05	7.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.56E+00	7.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	7.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	9.92E-02	5.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.15E+01	9.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.59E-10	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.96E-08	1.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.06E+00	7.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series MDED

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.78E+00	3.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.16E-02	8.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.56E-03	1.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.79E+00	3.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.26E-07	8.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.42E-02	2.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.55E-03	4.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.05E-04	2.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.87E-03	1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.07E-02	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	8.40E-03	2.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.57E-05	1.30E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.94E+01	5.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.49E+00	1.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Resource use	PERE	MJ	5.50E+00	6.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERM		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT		MJ	5.50E+00	6.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE		MJ	8.52E+01	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRM		MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT		MJ	1.26E+02	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SM		kg	0.00E+00	0.00E+00	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	0.00E+00
NRSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW		m ³	1.43E-02	2.83E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.79E-05	1.48E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.72E-01	2.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.14E-05	3.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.63E+00	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.01E-07	3.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	9.72E-02	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.24E+01	4.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.88E-10	2.34E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.02E-08	5.75E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.23E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series RXGT

Indicator		Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.78E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.25E-02	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.94E-03	2.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.80E+00	5.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.20E-07	1.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.29E-02	3.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.68E-03	6.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.79E-04	4.13E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.59E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.72E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	8.44E-03	3.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.55E-05	1.86E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.92E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.82E+00	2.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Resource use	PERE	MJ	4.15E+00	9.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERM		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT		MJ	4.15E+00	9.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE		MJ	8.49E+01	8.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRM		MJ	3.93E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT		MJ	1.24E+02	8.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SM		kg	0.00E+00	0.00E+00	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	0.00E+00
NRSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW		m ³	1.80E-02	4.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.54E-05	2.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.70E-01	4.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.64E-05	5.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.63E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.04E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.28E-01	3.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.37E+01	7.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.33E-10	3.33E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.09E-08	8.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.30E+00	5.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series EDCP

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.78E+00	3.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.15E-02	8.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.55E-03	1.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.79E+00	3.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.59E-07	8.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.51E-02	2.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.57E-03	4.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.99E-04	2.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.98E-03	1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.20E-02	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	8.72E-03	2.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.56E-05	1.30E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.96E+01	5.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.47E+00	1.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.50E+00	6.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.50E+00	6.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.54E+01	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.24E+02	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.39E-02	2.83E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.75E-05	1.48E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.50E-01	2.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	7.56E-05	3.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.63E+00	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.05E-07	3.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.06E-01	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.29E+01	4.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.78E-10	2.34E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.00E-08	5.75E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.21E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series PE100GJ

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.15E-02	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.36E-03	2.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.75E+00	5.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.61E-07	1.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.49E-02	3.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.53E-03	6.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.94E-04	4.13E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.95E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.17E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	8.64E-03	3.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.54E-05	1.86E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.92E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.45E+00	2.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Resource use	PERE	MJ	5.49E+00	9.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERM		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT		MJ	5.49E+00	9.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE		MJ	8.49E+01	8.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRM		MJ	3.84E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT		MJ	1.23E+02	8.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SM		kg	0.00E+00	0.00E+00	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	0.00E+00
NRSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW		m ³	1.37E-02	4.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.75E-05	2.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.48E-01	4.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	7.54E-05	5.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.59E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.04E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.05E-01	3.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.26E+01	7.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.73E-10	3.33E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.98E-08	8.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.18E+00	5.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	7.49E-03

EPD Results for 1kg of Series PE100J

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	1.15E-02	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.36E-03	2.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.75E+00	5.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.61E-07	1.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.49E-02	3.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.53E-03	6.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.94E-04	4.13E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.95E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.17E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	8.64E-03	3.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.54E-05	1.86E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.92E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.45E+00	2.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.49E+00	9.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.49E+00	9.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.49E+01	8.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.84E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.23E+02	8.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.37E-02	4.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.75E-05	2.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.48E-01	4.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	7.54E-05	5.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.59E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.04E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.05E-01	3.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.26E+01	7.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.73E-10	3.33E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.98E-08	8.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.18E+00	5.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	7.49E-03

EPD Results for 1kg of Series 500

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.61E+00	4.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	9.57E-03	8.83E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.51E-03	1.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.62E+00	4.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.19E-07	9.41E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.19E-02	2.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.23E-03	4.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.57E-04	3.19E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.38E-03	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.53E-02	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	7.04E-03	2.91E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.53E-05	1.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.76E+01	6.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.38E+00	2.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Resource use	PERE	MJ	3.32E+00	7.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERM		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT		MJ	3.32E+00	7.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE		MJ	8.32E+01	6.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRM		MJ	3.93E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT		MJ	1.23E+02	6.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SM		kg	0.00E+00	0.00E+00	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	0.00E+00
NRSF		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW		m ³	1.48E-02	3.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	9.02E-05	1.64E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.48E-01	3.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	5.88E-05	4.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.46E+00	4.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	9.83E-08	4.22E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	9.30E-02	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	2.96E+01	5.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.27E-10	2.58E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.90E-08	6.34E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	4.76E+00	4.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series Comducts

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.70E+00	1.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	9.40E-03	3.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.54E-03	7.02E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.72E+00	1.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.61E-07	3.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.49E-02	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.44E-03	1.91E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.62E-04	1.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.94E-03	4.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.16E-02	4.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	8.60E-03	1.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	1.52E-05	5.86E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.89E+01	2.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.36E+00	8.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.35E+00	2.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.35E+00	2.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.47E+01	2.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.23E+02	2.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	1.46E-02	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waste	Hazardous waste disposed	kg	9.10E-05	6.65E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.38E-01	1.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	7.73E-05	1.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.56E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.04E-07	1.71E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.07E-01	1.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.08E+01	2.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	8.54E-10	1.05E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.94E-08	2.58E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	5.05E+00	1.79E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

PE pressure

EPD Results for 1kg of Series K Pipe

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.79E+00	3.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	7.50E-03	1.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.53E-03	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.80E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.36E-07	7.68E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.31E-02	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.88E-03	4.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	6.04E-04	2.95E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.61E-03	9.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.75E-02	9.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.19E-02	2.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.48E-05	9.22E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.93E+01	5.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.81E+00	1.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	4.02E+00	5.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	0.00E+00	5.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.50E+01	5.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.24E+02	5.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.79E-02	2.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.53E-05	1.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.58E-01	2.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	7.17E-05	3.42E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.64E+00	3.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.08E-07	3.50E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.33E-01	2.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.53E+01	4.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.50E-10	1.99E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.21E-08	5.52E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	7.07E+00	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series LAT

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.80E+00	3.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	7.49E-03	1.23E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.49E-03	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.80E+00	3.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.27E-07	6.95E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.32E-02	2.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.87E-03	3.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.93E-04	2.67E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.66E-03	8.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.82E-02	9.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.18E-02	2.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.52E-05	8.34E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.94E+01	4.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.75E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.10E+00	5.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.10E+00	5.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.51E+01	5.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	3.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	5.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.73E-02	2.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.57E-05	1.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.58E-01	2.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.66E-05	3.10E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.64E+00	3.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.05E-07	3.17E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.26E-01	2.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.53E+01	4.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.56E-10	1.80E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential -non cancer effects	CTUh	2.17E-08	5.00E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	8.33E+00	3.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	2.04E-04

EPD Results for 1kg of Series MD

Indicator		Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.77E+00	3.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.94E-03	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.25E-03	1.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.77E+00	3.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.35E-07	7.83E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.41E-02	2.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.64E-03	4.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.02E-04	3.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.83E-03	9.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.05E-02	1.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.12E-02	2.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.66E-05	9.41E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.90E+01	5.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.52E+00	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	4.32E+00	5.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	4.32E+00	5.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.47E+01	5.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	5.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.46E-02	2.52E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.70E-05	1.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.59E-01	2.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.37E-05	3.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.61E+00	3.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.03E-07	3.57E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.02E-01	2.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.31E+01	4.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.80E-10	2.03E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential -non cancer effects	CTUh	2.10E-08	5.63E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.53E+01	3.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	1.51E-04

EPD Results for 1kg of Series MDBL

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.78E+00	6.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.99E-03	2.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.25E-03	2.23E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.78E+00	6.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.35E-07	1.36E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.44E-02	4.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.67E-03	7.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.04E-04	5.23E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.89E-03	1.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.12E-02	1.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.14E-02	4.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.68E-05	1.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.91E+01	9.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.52E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	4.33E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	4.33E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.48E+01	9.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	9.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.46E-02	4.37E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.73E-05	2.42E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.63E-01	4.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.37E-05	6.05E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.62E+00	6.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.03E-07	6.17E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.02E-01	4.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.33E+01	8.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.86E-10	3.51E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential -non cancer effects	CTUh	2.11E-08	9.74E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.53E+01	6.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	7.28E-04

EPD Results for 1kg of Series MDEF

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.76E+00	3.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.66E-03	1.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.26E-03	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.76E+00	3.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.35E-07	8.40E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.41E-02	2.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.62E-03	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.99E-04	3.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.82E-03	1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.03E-02	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.11E-02	3.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.87E+01	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.54E+00	1.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.44E+00	6.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.44E+00	6.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.44E+01	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.47E-02	2.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste	Hazardous waste disposed	kg	1.68E-05	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-hazardous waste disposed		kg	2.60E-01	2.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Radioactive waste disposed		kg	6.38E-05	3.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.60E+00	3.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.03E-07	3.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.02E-01	2.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.27E+01	5.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.79E-10	2.17E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.12E-08	6.03E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	3.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series MDID

Indicator		Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.75E+00	5.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.67E-03	2.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.21E-03	1.89E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.76E+00	5.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.35E-07	1.15E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.40E-02	3.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.62E-03	6.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.97E-04	4.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.81E-03	1.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.02E-02	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.11E-02	4.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.86E+01	7.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.53E+00	2.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.44E+00	8.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.44E+00	8.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.43E+01	8.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	8.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.47E-02	3.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.68E-05	2.05E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.60E-01	3.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.37E-05	5.13E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.60E+00	5.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	5.24E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.02E-01	3.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.27E+01	6.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.78E-10	2.98E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.11E-08	8.26E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	5.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	1.74E-03

EPD Results for 1kg of Series MDPUR

Indicator		Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.76E+00	3.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.68E-03	1.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.26E-03	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.77E+00	3.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.33E-07	8.40E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.41E-02	2.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.63E-03	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.00E-04	3.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.83E-03	1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.05E-02	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.12E-02	3.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.88E+01	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.54E+00	1.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.44E+00	6.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.44E+00	6.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.45E+01	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.47E-02	2.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.68E-05	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.60E-01	2.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.29E-05	3.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.61E+00	3.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	3.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.01E-01	2.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.27E+01	5.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.81E-10	2.17E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.12E-08	6.03E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	3.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series PE100

Indicator		Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.86E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.14E-03	1.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.75E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.35E-07	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.40E-02	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.61E-03	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.97E-04	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.81E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.02E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.11E-02	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.86E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.52E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.89E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.89E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.43E+01	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.45E-02	3.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.69E-05	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.59E-01	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.36E-05	5.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.59E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.02E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.01E-01	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.28E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.76E-10	3.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential -non cancer effects	CTUh	2.10E-08	8.60E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	4.78E-03

EPD Results for 1kg of Series PE100BL

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.79E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	5.39E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.27E-03	1.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.80E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.36E-07	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.50E-02	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.72E-03	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.09E-04	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.99E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.22E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.16E-02	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.61E-05	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.95E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.50E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.55E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.55E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.53E+01	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.26E+02	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.44E-02	3.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.67E-05	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.41E-01	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.43E-05	5.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.64E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.01E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.03E-01	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.38E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.79E-10	3.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential -non cancer effects	CTUh	2.06E-08	8.60E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.51E+01	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series PE100BS

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.87E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.11E-03	1.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.75E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.36E-07	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.48E-02	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.65E-03	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.97E-04	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.93E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.16E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.14E-02	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.57E-05	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.86E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.52E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.72E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.72E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.43E+01	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.45E-02	3.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.61E-05	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.41E-01	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.42E-05	5.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.59E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.00E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.03E-01	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.26E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.73E-10	3.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.08E-08	8.60E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.50E+01	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	6.38E-03

EPD Results for 1kg of Series PE100CR

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.77E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	5.28E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.25E-03	1.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.78E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.47E-07	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.42E-02	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.66E-03	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	5.04E-04	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.86E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.07E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.12E-02	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.68E-05	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.94E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.49E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.54E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.54E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.52E+01	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.43E-02	3.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.75E-05	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.58E-01	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.86E-05	5.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.62E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.04E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.04E-01	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.39E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.80E-10	3.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.07E-08	8.60E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	0.00E+00

EPD Results for 1kg of Series PE100CS

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.75E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.89E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.19E-03	1.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.75E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.47E-07	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.41E-02	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.62E-03	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.97E-04	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.82E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.03E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.11E-02	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.89E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.51E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	4.25E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	4.25E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.46E+01	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.44E-02	3.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.71E-05	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.58E-01	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.86E-05	5.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.60E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.04E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.04E-01	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.32E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.76E-10	3.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.09E-08	8.60E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	2.54E-03

EPD Results for 1kg of Series 310

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.65E+00	1.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	4.37E-03	5.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.07E-03	5.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.65E+00	1.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.32E-07	3.05E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.36E-02	9.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.52E-03	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.80E-04	1.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.70E-03	3.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	2.90E-02	3.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.08E-02	1.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.61E-05	3.64E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.80E+01	2.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.38E+00	6.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.37E+00	2.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.37E+00	2.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.37E+01	2.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.24E+02	2.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.49E-02	9.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	8.99E-05	5.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.38E-01	9.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.33E-05	1.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.50E+00	1.38E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	9.92E-08	1.39E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.01E-01	9.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.11E+01	1.82E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.45E-10	7.88E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.97E-08	2.19E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.49E+01	1.38E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	7.49E-03

EPD Results for 1kg of Series 1200

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.69E+00	3.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	2.58E-03	1.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.22E-03	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.70E+00	3.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.33E-07	8.37E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.40E-02	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.57E-03	4.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.87E-04	3.22E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.79E-03	9.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.00E-02	1.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.10E-02	2.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.85E+01	5.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.39E+00	1.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.41E+00	6.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.41E+00	6.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.42E+01	6.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	6.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.51E-02	2.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	9.02E-05	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.43E-01	2.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.35E-05	3.73E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.54E+00	3.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.00E-07	3.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.02E-01	2.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.14E+01	4.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.56E-10	2.17E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.00E-08	6.02E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.51E+01	3.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	1.42E-03

EPD Results for 1kg of Series 1210

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.66E+00	3.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	-4.83E-03	1.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.08E-03	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.66E+00	3.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.31E-07	8.37E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.44E-02	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.57E-03	4.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.84E-04	3.22E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.83E-03	9.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.05E-02	1.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.11E-02	2.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.55E-05	1.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.81E+01	5.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.38E+00	1.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	3.49E+00	6.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	3.49E+00	6.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.37E+01	6.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.24E+02	6.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.49E-02	2.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	8.92E-05	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.20E-01	2.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.27E-05	3.73E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.51E+00	3.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	9.72E-08	3.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.01E-01	2.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.11E+01	4.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.44E-10	2.17E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	1.96E-08	6.02E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.55E+01	3.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	7.49E-03

EPD Results for 1kg of Series PE100LJ

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	5.36E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.06E-03	1.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.46E-07	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.40E-02	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.62E-03	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.98E-04	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.82E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.04E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.11E-02	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.90E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.48E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.53E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.53E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.47E+01	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.41E-02	3.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.75E-05	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.57E-01	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.84E-05	5.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.59E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.03E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.03E-01	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.36E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.75E-10	3.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential -non cancer effects	CTUh	2.06E-08	8.60E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	7.49E-03

EPD Results for 1kg of Series PE100LS

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Environmental impacts	GWP-fossil	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-biogenic	kg CO ₂ eq.	5.36E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-luluc	kg CO ₂ eq.	1.06E-03	1.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	GWP-total	kg CO ₂ eq.	2.74E+00	5.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ODP	kg CFC 11 eq.	1.46E-07	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	AP	mol H ⁺ eq.	1.40E-02	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg PO ₄ ³⁻ eq.	2.62E-03	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-freshwater	kg P eq.	4.98E-04	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-marine	kg N eq.	2.82E-03	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	EP-terrestrial	mol N eq.	3.04E-02	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	POCP	kg NMVOC eq.	1.11E-02	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-minerals&metals*	kg Sb eq.	2.65E-05	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	ADP-fossil*	MJ	7.90E+01	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	WDP	m ³	1.48E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource use	PERE	MJ	5.53E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	5.53E+00	9.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRE	MJ	8.47E+01	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRM	MJ	4.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PENRT	MJ	1.25E+02	8.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	SM	kg	0.00E+00	0.00E+00	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	0.00E+00
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	FW	m ³	1.41E-02	3.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste	Hazardous waste disposed	kg	1.75E-05	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-hazardous waste disposed	kg	2.57E-01	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Radioactive waste disposed	kg	6.84E-05	5.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output flows	Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Additional environmental impacts	GWP-GHG	kg CO ₂ eq.	2.59E+00	5.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Particulate matter	disease incidence	1.03E-07	5.45E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Ionising radiation - human health	kBq U-235 eq	1.03E-01	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Eco-toxicity (freshwater)	CTUe	3.36E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - cancer effects	CTUh	7.75E-10	3.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Human toxicity potential - non cancer effects	CTUh	2.06E-08	8.60E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Soil quality	dimensionless	1.52E+01	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	Indicator	Unit	Quantity
Biogenic content	Biogenic carbon content in product	kg C	0.00E+00
	Biogenic carbon content in packaging	kg C	7.49E-03

Appendix B – Product Detail

Table 1 and Table 2 show product details for RXP pipe products included in this study. Other product specifications are available on their website.

Table 1. PE non-pressure products

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
DA110	Land Drainage	110	0.500	15	DA110.015SL
DA110	Land Drainage	110	0.500	30	DA110.030SL
DA110	Land Drainage	110	0.500	50	DA110.050SL
DA110	Land Drainage	110	0.500	100	DA110.100SL
DA110	Land Drainage	110	0.500	15	DA110US.015
DA110	Land Drainage	110	0.500	30	DA110US.030
DA110	Land Drainage	110	0.500	50	DA110US.050
DA110	Land Drainage	110	0.500	100	DA110US.100
DA160	Land Drainage	160	0.95	15	DA160.015SL
DA160	Land Drainage	160	0.95	45	DA160.045SL
DA160	Land Drainage	160	0.95	15	DA160US.015
DA160	Land Drainage	160	0.95	45	DA160US.045
DA65	Land Drainage	65	0.33	15	DA65.015SL
DA65	Land Drainage	65	0.33	30	DA65.030SL
DA65	Land Drainage	65	0.33	50	DA65.050SL
DA65	Land Drainage	65	0.33	100	DA65.100SL
DA65	Land Drainage	65	0.33	150	DA65.150SL
DA65	Land Drainage	65	0.33	15	DA65US.015
DA65	Land Drainage	65	0.33	30	DA65US.030
DA65	Land Drainage	65	0.33	50	DA65US.050
DAFS	Land Drainage	110	0.5	15	DAFS110.015
DAFS	Land Drainage	110	0.5	30	DAFS110.030
DAFS	Land Drainage	110	0.5	50	DAFS110.050
DAFS	Land Drainage	110	0.5	100	DAFS110.100
DAFS	Land Drainage	160	0.95	45	DAFS160.045
DAFW	Land Drainage	110	0.62	100	DAFW110.100
DAFW	Land Drainage	160	1.23	45	DAFW160.045
RXGT	Gun tube	25	0.125	50	RXGT25.050
RXGT	Gun tube	25	0.125	60	RXGT25.060
RXGT	Gun tube	25	0.125	70	RXGT25.070
RXGT	Gun tube	25	0.125	100	RXGT25.100
RXGT	Gun tube	25	0.125	200	RXGT25.200
RXSTLD		25	0.227	25	RXSTLD25.025
EDCP		110.00	2.20	100	EDCP110*SDR17.100
EDCP		140	3.50	100	EDCP140*SDR17.100
JIFFY		15.00	0.11	20	JIFFY15.200
JIFFY		25	0.28	10	JIFFY25.100
PE100GJ	Telecom	110	2.12	6	PE100GJ.110.SDR17.006
PE100GJ	Telecom	110	2.18	12	PE100GJ.110.SDR17.012
PE100LJ	Waste water	250	16.36	12	PE100LJ.250*16B.012
PE100LS	Waste water	125	3.50	12	PE100LS.125*12B.012
PE100OJ	Electrical	110	2.18	6	PE100OJ.110.SDR17.006
PE100OJ	Electrical	110	2.18	12	PE100OJ.110.SDR17.012
PE100OJ	Electrical	160	4.51	12	PE100OJ.160*10B.012
PE100OJ	Electrical	160	4.51	4	PE100OJ.160.SDR17.004
RXGT		25		50	RXGT25.050
RXGT		25		60	RXGT25.060
RXGT		25		70	RXGT25.070
RXGT		25		240	RXGT25.240
MDED	Irrigation/Pressure	110	2.096	100	MDED110*08B.100
MDED	Irrigation/Pressure	125	2.719	100	MDED125*08B.100

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
MDED	Irrigation/Pressure	140	3.43	100	MDED140*08B.100
MDED	Irrigation/Pressure	160	4.364	50	MDED160*08B.050
MDED	Irrigation/Pressure	160	4.364	100	MDED160*08B.100
MDED	Irrigation/Pressure	32	0.174	100	MDED32*08B.100
MDED	Irrigation/Pressure	40	0.283	100	MDED40*08B.100
MDED	Irrigation/Pressure	50	0.463	100	MDED50*08B.100
MDED	Irrigation/Pressure	63	0.682	100	MDED63*08B.100
MDED	Irrigation/Pressure	25	0.213	1.2	MDPK25*12B.001.2
MDED	Irrigation/Pressure	32	0.251	200	MDR32*08B.200
MDED	Irrigation/Pressure	50	0.473	150	MDR50*08B.150
MDED	Irrigation/water supply	90	1.472	100	MDED90*08B.100

Table 2. PE pressure products

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
K Pipe	Irrigation	32	0.35	100	K.PIPE32.100
K Pipe	Irrigation	32	0.35	200	K.PIPE32.200
K Pipe	Irrigation	40	0.405	100	K.PIPE40.100
K Pipe	Irrigation	40	0.405	300	K.PIPE40.300
K Pipe	Irrigation	45	0.45	100	K.PIPE45.100
K Pipe	Irrigation	45	0.45	120	K.PIPE45.120
K Pipe	Irrigation	45	0.45	200	K.PIPE45.200
K Pipe	Irrigation	63.00	0.71	30	K.PIPE63.030
K Pipe	Irrigation	63.00	0.71	40	K.PIPE63.040
K Pipe	Irrigation	63	0.71	50	K.PIPE63.050
K Pipe	Irrigation	63	0.71	100	K.PIPE63.100
LAT	Irrigation	13	0.059	20	LAT13.020
LAT	Irrigation	13	0.059	50	LAT13.050
LAT	Irrigation	13	0.059	100	LAT13.100
LAT	Irrigation	13	0.059	200	LAT13.200
LAT	Irrigation	13	0.059	400	LAT13.400
LAT	Irrigation	16	0.074	25	LAT16.025
LAT	Irrigation	16	0.074	50	LAT16.050
LAT	Irrigation	16	0.074	100	LAT16.100
LAT	Irrigation	16	0.074	200	LAT16.200
LAT	Irrigation	16	0.074	300	LAT16.300
LAT	Irrigation	16	0.074	400	LAT16.400
LAT	Irrigation	19	0.108	25	LAT19.025
LAT	Irrigation	19	0.108	50	LAT19.050
LAT	Irrigation	19	0.108	100	LAT19.100
LAT	Irrigation	19	0.108	200	LAT19.200
LAT	Irrigation	19.00	0.108	300	LAT19.300
LAT	Irrigation	25	0.162	25	LAT25.025
LAT	Irrigation	25	0.162	50	LAT25.050
LAT	Irrigation	25	0.162	100	LAT25.100
LAT	Irrigation	25	0.162	25	LAT25.200
LD	Irrigation	15	0.108	6	LD15.006
LD	Irrigation	15	0.108	10	LD15.010
LD	Irrigation	15	0.108	25	LD15.025
LD	Irrigation	15	0.108	50	LD15.050
LD	Irrigation	15	0.108	100	LD15.100
LD	Irrigation	15	0.108	200	LD15.200
LD	Irrigation	20	0.211	6	LD20.006.10
LD	Irrigation	20	0.211	10	LD20.010

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
LD	Irrigation	20	0.211	25	LD20.025
LD	Irrigation	20	0.211	50	LD20.050
LD	Irrigation	20	0.211	100	LD20.100
LD	Irrigation	20	0.211	200	LD20.200
LD	Irrigation	25	0.271	6	LD25.006
LD	Irrigation	25	0.271	6	LD25.006:10
LD	Irrigation	25	0.271	10	LD25.010
LD	Irrigation	25	0.271	25	LD25.025
LD	Irrigation	25	0.271	50	LD25.050
LD	Irrigation	25	0.271	100	LD25.100
LD	Irrigation	25	0.271	200	LD25.200
LD	Irrigation	32	0.329	6	LD32.006
LD	Irrigation	32	0.329	25	LD32.025
LD	Irrigation	32	0.329	50	LD32.050
LD	Irrigation	32	0.329	100	LD32.100
LD	Irrigation	32	0.329	200	LD32.200
LD	Irrigation	40	0.391	25	LD40.025
LD	Irrigation	40	0.391	50	LD40.050
LD	Irrigation	40	0.391	100	LD40.100
LD	Irrigation	40	0.391	200	LD40.200
LD	Irrigation	50	0.531	25	LD50.025
LD	Irrigation	50	0.531	50	LD50.050
LD	Irrigation	50	0.531	100	LD50.100
LD	Irrigation	50	0.531	200	LD50.200
MD	Irrigation/Pressure	110	2.19	50	MD110*08B.050
MD	Irrigation/Pressure	110	2.19	100	MD110*08B.100
MD	Irrigation/Pressure	110	2.345	100	MD110*09B.100
MD	Irrigation/Pressure	110	3.187	50	MD110*12B.050
MD	Irrigation/Pressure	110	3.187	100	MD110*12B.100
MD	Irrigation/Pressure	110	3.831	100	MD110*16B.100
MD	Irrigation/Pressure	160	5.58	12	MD160*10B.012
MD	Irrigation/Pressure	20	0.096	25	MD20*09B.025
MD	Irrigation/Pressure	20	0.096	100	MD20*09B.100
MD	Irrigation/Pressure	20	0.096	200	MD20*09B.200
MD	Irrigation/Pressure	25	0.108	100	MD25*08B.100
MD	Irrigation/Pressure	25	0.108	200	MD25*08B.200
MD	Irrigation/Pressure	25	0.122	25	MD25*09B.025
MD	Irrigation/Pressure	25	0.122	50	MD25*09B.050
MD	Irrigation/Pressure	25	0.122	100	MD25*09B.100
MD	Irrigation/Pressure	25	0.122	200	MD25*09B.200
MD	Irrigation/Pressure	25	0.122	500	MD25*09B.500
MD	Irrigation/Pressure	25	0.171	6	MD25*12B.006
MD	Irrigation/Pressure	25	0.171	25	MD25*12B.025
MD	Irrigation/Pressure	25	0.171	500	MD25*12B.050
MD	Irrigation/Pressure	25	0.171	100	MD25*12B.100
MD	Irrigation/Pressure	25	0.171	200	MD25*12B.200
MD	Irrigation/Pressure	32	0.174	25	MD32*08B.025
MD	Irrigation/Pressure	32	0.174	500	MD32*08B.050
MD	Irrigation/Pressure	32	0.174	100	MD32*08B.100
MD	Irrigation/Pressure	32	0.174	200	MD32*08B.200
MD	Irrigation/Pressure	32	0.186	25	MD32*09B.025
MD	Irrigation/Pressure	32	0.186	500	MD32*09B.050
MD	Irrigation/Pressure	32	0.186	100	MD32*09B.100
MD	Irrigation/Pressure	32	0.186	200	MD32*09B.200
MD	Irrigation/Pressure	32	0.272	0.5	MD32*12B.000.5
MD	Irrigation/Pressure	32	0.272	6	MD32*12B.006

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
MD	Irrigation/Pressure	32	0.272	25	MD32*12B.025
MD	Irrigation/Pressure	32	0.272	500	MD32*12B.050
MD	Irrigation/Pressure	32	0.272	100	MD32*12B.100
MD	Irrigation/Pressure	32	0.272	200	MD32*12B.200
MD	Irrigation/Pressure	32	0.272	300	MD32*12B.300
MD	Irrigation/Pressure	32	0.319	6	MD32*16B.006
MD	Irrigation/Pressure	40	0.236	25	MD40*06B.025
MD	Irrigation/Pressure	40	0.236	500	MD40*06B.050
MD	Irrigation/Pressure	40	0.236	100	MD40*06B.100
MD	Irrigation/Pressure	40	0.236	200	MD40*06B.200
MD	Irrigation/Pressure	40	0.263	6	MD40*09B.006
MD	Irrigation/Pressure	40	0.263	25	MD40*09B.025
MD	Irrigation/Pressure	40	0.263	500	MD40*09B.050
MD	Irrigation/Pressure	40	0.263	100	MD40*09B.100
MD	Irrigation/Pressure	40	0.263	200	MD40*09B.200
MD	Irrigation/Pressure	40	0.263	300	MD40*09B.300
MD	Irrigation/Pressure	40	0.433	6	MD40*12B.006
MD	Irrigation/Pressure	40	0.433	25	MD40*12B.025
MD	Irrigation/Pressure	40	0.433	500	MD40*12B.050
MD	Irrigation/Pressure	40	0.433	100	MD40*12B.100
MD	Irrigation/Pressure	40	0.433	200	MD40*12B.200
MD	Irrigation/Pressure	40	0.492	6	MD40*16B.006
MD	Irrigation/Pressure	50	0.374	25	MD50*06B.025
MD	Irrigation/Pressure	50	0.374	500	MD50*06B.050
MD	Irrigation/Pressure	50	0.374	100	MD50*06B.100
MD	Irrigation/Pressure	50	0.374	200	MD50*06B.200
MD	Irrigation/Pressure	50	0.414	25	MD50*09B.025
MD	Irrigation/Pressure	50	0.414	500	MD50*09B.050
MD	Irrigation/Pressure	50	0.414	100	MD50*09B.100
MD	Irrigation/Pressure	50	0.414	200	MD50*09B.200
MD	Irrigation/Pressure	50	0.672	6	MD50*12B.006
MD	Irrigation/Pressure	50	0.672	25	MD50*12B.025
MD	Irrigation/Pressure	63	0.64	25	MD63*06B.025
MD	Irrigation/Pressure	63	0.64	500	MD63*06B.050
MD	Irrigation/Pressure	63	0.64	100	MD63*06B.100
MD	Irrigation/Pressure	63	0.67	25	MD63*08B.025
MD	Irrigation/Pressure	63	0.67	500	MD63*08B.050
MD	Irrigation/Pressure	63	0.67	100	MD63*08B.100
MD	Irrigation/Pressure	63	0.67	200	MD63*08B.200
MD	Irrigation/Pressure	63	0.765	4	MD63*09B.004
MD	Irrigation/Pressure	63	0.765	4.4	MD63*09B.004.4
MD	Irrigation/Pressure	63	0.765	25	MD63*09B.025
MD	Irrigation/Pressure	63	0.765	50	MD63*09B.050
MD	Irrigation/Pressure	63	0.765	65	MD63*09B.065
MD	Irrigation/Pressure	63	0.765	70	MD63*09B.070
MD	Irrigation/Pressure	63	0.765	100	MD63*09B.100
MD	Irrigation/Pressure	63	0.765	200	MD63*09B.200
MD	Irrigation/Pressure	63	1.062	6	MD63*12B.006
MD	Irrigation/Pressure	63	1.062	25	MD63*12B.025
MD	Irrigation/Pressure	63	1.062	50	MD63*12B.050
MD	Irrigation/Pressure	63	1.062	100	MD63*12B.100
MD	Irrigation/Pressure	75	0.832	50	MD75*06B.050
MD	Irrigation/Pressure	75	1.033	50	MD75*08B.050
MD	Irrigation/Pressure	75	1.033	100	MD75*08B.100
MD	Irrigation/Pressure	75	1.078	25	MD75*09B.025
MD	Irrigation/Pressure	75	1.078	50	MD75*09B.050

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
MD	Irrigation/Pressure	75	1.078	100	MD75*09B.100
MD	Irrigation/Pressure	75	1.078	200	MD75*09B.200
MD	Irrigation/Pressure	75	1.481	6	MD75*12B.006
MD	Irrigation/Pressure	90	1.194	6	MD90*06B.006
MD	Irrigation/Pressure	90	1.194	25	MD90*06B.025
MD	Irrigation/Pressure	90	1.194	50	MD90*06B.050
MD	Irrigation/Pressure	90	1.194	100	MD90*06B.100
MD	Irrigation/Pressure	90	1.472	25	MD90*08B.025
MD	Irrigation/Pressure	90	1.472	50	MD90*08B.050
MD	Irrigation/Pressure	90	1.472	100	MD90*08B.100
MD	Irrigation/Pressure	90	1.571	25	MD90*09B.025
MD	Irrigation/Pressure	90	1.571	100	MD90*09B.100
MD	Irrigation/Pressure	90	1.571	200	MD90*09B.200
MD	Irrigation/Pressure	90	2.149	6	MD90*12B.006
MDBL	Irrigation/Pressure	20	0.105	100	MDBL20*12B.100
MDBL	Irrigation/Pressure	25	0.171	5	MDBL25*12B.005
MDBL	Irrigation/Pressure	25	0.171	25	MDBL25*12B.025
MDBL	Irrigation/Pressure	25	0.171	50	MDBL25*12B.050
MDBL	Irrigation/Pressure	25	0.171	100	MDBL25*12B.100
MDBL	Irrigation/Pressure	25	0.171	200	MDBL25*12B.200
MDBL	Irrigation/Pressure	32	0.272	5	MDBL32*12B.005
MDBL	Irrigation/Pressure	32	0.272	25	MDBL32*12B.025
MDBL	Irrigation/Pressure	32	0.272	50	MDBL32*12B.050
MDBL	Irrigation/Pressure	32	0.272	100	MDBL32*12B.100
MDBL	Irrigation/Pressure	32	0.272	200	MDBL32*12B.200
MDBL	Irrigation/Pressure	40	0.433	5	MDBL40*12B.005
MDBL	Irrigation/Pressure	40	0.433	25	MDBL40*12B.025
MDBL	Irrigation/Pressure	40	0.433	100	MDBL40*12B.100
MDBL	Irrigation/Pressure	40	0.433	200	MDBL40*12B.200
MDBL	Irrigation/Pressure	50	0.672	5	MDBL50*12B.005
MDBL	Irrigation/Pressure	50	0.672	25	MDBL50*12B.025
MDBL	Irrigation/Pressure	50	0.672	50	MDBL50*12B.050
MDBL	Irrigation/Pressure	50	0.672	100	MDBL50*12B.100
MDBL	Irrigation/Pressure	63	1.062	5	MDBL63*12B.005
MDBL	Irrigation/Pressure	63	1.062	25	MDBL63*12B.025
MDBL	Irrigation/Pressure	63	1.062	50	MDBL63*12B.050
MDBL	Irrigation/Pressure	63	1.062	100	MDBL63*12B.100
MDBL	Irrigation/Pressure	63	1.062	200	MDBL63*12B.200
MDED	Irrigation/Pressure	110	2.096	100	MDED110*08B.100
MDED	Irrigation/Pressure	125	2.719	100	MDED125*08B.100
MDED	Irrigation/Pressure	140	3.43	100	MDED140*08B.100
MDED	Irrigation/Pressure	160	4.364	50	MDED160*08B.050
MDED	Irrigation/Pressure	160	4.364	100	MDED160*08B.100
MDED	Irrigation/Pressure	32	0.174	100	MDED32*08B.100
MDED	Irrigation/Pressure	40	0.283	100	MDED40*08B.100
MDED	Irrigation/Pressure	50	0.463	100	MDED50*08B.100
MDED	Irrigation/Pressure	63	0.682	100	MDED63*08B.100
MDED	Irrigation/Pressure	25	0.213	1.2	MDPK25*12B.001.2
MDED	Irrigation/Pressure	32	0.251	200	MDR32*08B.200
MDED	Irrigation/Pressure	50	0.473	150	MDR50*08B.150
PE100	Irrigation/Pressure	110	2.183	6	PE100.110*10B.006ST
PE100	Irrigation/Pressure	110	2.183	12	PE100.110*10B.012
PE100	Irrigation/Pressure	110	2.183	50	PE100.110*10B.050
PE100	Irrigation/Pressure	110	2.183	100	PE100.110*10B.100
PE100	Irrigation/Pressure	110	2.64	12	PE100.110*12B.012
PE100	Irrigation/Pressure	110	2.64	100	PE100.110*12B.100

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
PE100	Irrigation/Pressure	110	3.177	6	PE100.110*16B.006ST
PE100	Irrigation/Pressure	125	2.785	6	PE100.125*10B.006
PE100	Irrigation/Pressure	125	2.785	12	PE100.125*10B.012
PE100	Irrigation/Pressure	125	3.403	6	PE100.125*12B.006
PE100	Irrigation/Pressure	125	3.403	12	PE100.125*12B.012
PE100	Irrigation/Pressure	125	4.122	6	PE100.125*16B.006ST
PE100	Irrigation/Pressure	125	4.122	12	PE100.125*16B.012
PE100	Irrigation/Pressure	160	4.563	6	PE100.160*10B.006
PE100	Irrigation/Pressure	160	4.563	6	PE100.160*10B.006ST
PE100	Irrigation/Pressure	160	4.563	12	PE100.160*10B.012
PE100	Irrigation/Pressure	160	4.563	12	PE100.160*10B.012ST
PE100	Irrigation/Pressure	160	5.563	6	PE100.160*12B.006
PE100	Irrigation/Pressure	160	5.563	12	PE100.160*12B.012
PE100	Irrigation/Pressure	160	6.744	6	PE100.160*16B.006
PE100	Irrigation/Pressure	160	6.744	6	PE100.160*16B.006ST
PE100	Irrigation/Pressure	160	6.744	12	PE100.160*16B.012
PE100	Irrigation/Pressure	160	6.744	12	PE100.160*16B.012ST
PE100	Irrigation/Pressure	180	3.817	12	PE100.180*06B.012
PE100	Irrigation/Pressure	180	4.709	11.8	PE100.180*08B.011.8
PE100	Irrigation/Pressure	180	5.772	6	PE100.180*10B.006
PE100	Irrigation/Pressure	180	5.772	6	PE100.180*10B.006ST
PE100	Irrigation/Pressure	180	5.772	12	PE100.180*10B.012
PE100	Irrigation/Pressure	180	7.061	6	PE100.180*12B.006
PE100	Irrigation/Pressure	180	8.524	6	PE100.180*16B.006ST
PE100	Irrigation/Pressure	180	8.524	12	PE100.180*16B.012
PE100	Irrigation/Pressure	180	10.197	15	PE100.180*20B.015
PE100	Irrigation/Pressure	200	7.122	6	PE100.200*10B.006
PE100	Irrigation/Pressure	200	7.122	6	PE100.200*10B.006ST
PE100	Irrigation/Pressure	200	7.122	12	PE100.200*10B.012
PE100	Irrigation/Pressure	225	5.712	12	PE100.225*06B.012
PE100	Irrigation/Pressure	225	9.033	6	PE100.225*10B.006ST
PE100	Irrigation/Pressure	225	9.033	11.15	PE100.225*10B.011.15
PE100	Irrigation/Pressure	225	9.033	11.8	PE100.225*10B.011.8
PE100	Irrigation/Pressure	225	9.033	12	PE100.225*10B.012
PE100	Irrigation/Pressure	225	9.033	12	PE100.225*10B.012ST
PE100	Irrigation/Pressure	225	9.033	15	PE100.225*10B.015
PE100	Irrigation/Pressure	225	10.996	6	PE100.225*12B.006
PE100	Irrigation/Pressure	225	10.996	12	PE100.225*12B.012
PE100	Irrigation/Pressure	225	13.305	12	PE100.225*16B.012
PE100	Irrigation/Pressure	25	0.237	6	PE100.25*25B.006ST
PE100	Irrigation/Pressure	250	11.904	6	PE100.250*10B.006ST
PE100	Irrigation/Pressure	250	11.904	12	PE100.250*10B.012
PE100	Irrigation/Pressure	250	16.399	6	PE100.250*16B.006ST
PE100	Irrigation/Pressure	32	0.174	54	PE100.32*10B.054
PE100	Irrigation/Pressure	32	0.174	200	PE100.32*10B.200
PE100	Irrigation/Pressure	32	0.222	50	PE100.32*12B.050
PE100	Irrigation/Pressure	32	0.222	100	PE100.32*12B.100
PE100	Irrigation/Pressure	32	0.222	200	PE100.32*12B.200
PE100	Irrigation/Pressure	32	0.271	100	PE100.32*16B.100
PE100	Irrigation/Pressure	32	0.271	125	PE100.32*16B.125
PE100	Irrigation/Pressure	32	0.382	6	PE100.32*25B.006ST
PE100	Irrigation/Pressure	40	0.221	100	PE100.40*08B.100
PE100	Irrigation/Pressure	40	0.221	200	PE100.40*08B.200
PE100	Irrigation/Pressure	40	0.283	100	PE100.40*10B.100
PE100	Irrigation/Pressure	40	0.283	200	PE100.40*10B.200
PE100	Irrigation/Pressure	40	0.357	50	PE100.40*12B.050

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
PE100	Irrigation/Pressure	40	0.357	100	PE100.40*12B.100
PE100	Irrigation/Pressure	40	0.357	200	PE100.40*12B.200
PE100	Irrigation/Pressure	40	0.431	6	PE100.40*16B.006ST
PE100	Irrigation/Pressure	40	0.431	100	PE100.40*16B.100
PE100	Irrigation/Pressure	40	0.431	200	PE100.40*16B.200
PE100	Irrigation/Pressure	50	0.363	100	PE100.50*08B.100
PE100	Irrigation/Pressure	50	0.363	200	PE100.50*08B.200
PE100	Irrigation/Pressure	50	0.436	100	PE100.50*10B.100
PE100	Irrigation/Pressure	50	0.436	200	PE100.50*10B.200
PE100	Irrigation/Pressure	50	0.551	50	PE100.50*12B.050
PE100	Irrigation/Pressure	50	0.551	100	PE100.50*12B.100
PE100	Irrigation/Pressure	50	0.551	200	PE100.50*12B.200
PE100	Irrigation/Pressure	50	0.669	6	PE100.50*16B.006
PE100	Irrigation/Pressure	50	0.669	6	PE100.50*16B.006ST
PE100	Irrigation/Pressure	50	0.669	50	PE100.50*16B.050
PE100	Irrigation/Pressure	50	0.669	100	PE100.50*16B.100
PE100	Irrigation/Pressure	50	0.669	200	PE100.50*16B.200
PE100	Irrigation/Pressure	50	0.768	200	PE100.50*20B.200
PE100	Irrigation/Pressure	50	0.937	6	PE100.50*25B.006ST
PE100	Irrigation/Pressure	63	0.67	50	PE100.63*10B.050
PE100	Irrigation/Pressure	63	0.67	100	PE100.63*10B.100
PE100	Irrigation/Pressure	63	0.67	200	PE100.63*10B.200
PE100	Irrigation/Pressure	63	0.878	50	PE100.63*12B.050
PE100	Irrigation/Pressure	63	0.878	100	PE100.63*12B.100
PE100	Irrigation/Pressure	63	0.878	110	PE100.63*12B.110
PE100	Irrigation/Pressure	63	0.878	200	PE100.63*12B.200
PE100	Irrigation/Pressure	63	1.059	6	PE100.63*16B.006ST
PE100	Irrigation/Pressure	63	1.059	200	PE100.63*16B.200
PE100	Irrigation/Pressure	63	1.200	100	PE100.63*18B.100
PE100	Irrigation/Pressure	63	1.200	200	PE100.63*18B.200
PE100	Irrigation/Pressure	63	1.290	25	PE100.63*20B.025
PE100	Irrigation/Pressure	63	1.290	100	PE100.63*20B.100
PE100	Irrigation/Pressure	63	1.29	200	PE100.63*20B.200
PE100	Irrigation/Pressure	63	1.414	6	PE100.63*25B.006ST
PE100	Irrigation/Pressure	75	0.813	100	PE100.75*08B.100
PE100	Irrigation/Pressure	75	1.02	100	PE100.75*10B.100
PE100	Irrigation/Pressure	75	1.02	200	PE100.75*10B.200
PE100	Irrigation/Pressure	75	1.225	50	PE100.75*12B.050
PE100	Irrigation/Pressure	75	1.225	100	PE100.75*12B.100
PE100	Irrigation/Pressure	75	1.225	200	PE100.75*12B.200
PE100	Irrigation/Pressure	75	1.478	6	PE100.75*16B.006ST
PE100	Irrigation/Pressure	75	1.478	100	PE100.75*16B.100
PE100	Irrigation/Pressure	75	1.478	200	PE100.75*16B.200
PE100	Irrigation/Pressure	75	1.744	100	PE100.75*20B.100
PE100	Irrigation/Pressure	90	1.19	50	PE100.90*08B.050
PE100	Irrigation/Pressure	90	1.19	100	PE100.90*08B.100
PE100	Irrigation/Pressure	90	1.467	50	PE100.90*10B.050
PE100	Irrigation/Pressure	90	1.467	100	PE100.90*10B.100
PE100	Irrigation/Pressure	90	1.76	12	PE100.90*12B.012
PE100	Irrigation/Pressure	90	1.76	25	PE100.90*12B.025
PE100	Irrigation/Pressure	90	1.76	50	PE100.90*12B.050
PE100	Irrigation/Pressure	90	1.76	100	PE100.90*12B.100
PE100	Irrigation/Pressure	90	2.143	6	PE100.90*16B.006ST
PE100	Irrigation/Pressure	90	2.143	100	PE100.90*16B.100
PE100	Irrigation/Pressure	90	2.6	100	PE100.90*20B.100
PE100BL	Irrigation/Pressure	125	3.403	12	PE100.BL125*12B.012

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
PE100BL	Irrigation/Pressure	180	7.061	12	PE100.BL180*12B.012
PE100BL	Irrigation/Pressure	250	13.545	12	PE100.BL250*12B.012
PE100BL	Irrigation/Pressure	125	3.403	12	PE100BL.125*12B.012
PE100BL	Irrigation/Pressure	125	4.122	6	PE100BL.125*16B.006
PE100BL	Irrigation/Pressure	125	4.122	12	PE100BL.125*16B.012
PE100BL	Irrigation/Pressure	125	4.122	50	PE100BL.125*16B.050
PE100BL	Irrigation/Pressure	125	4.122	100	PE100BL.125*16B.100
PE100BL	Irrigation/Pressure	180	7.061	12	PE100BL.180*12B.012
PE100BL	Irrigation/Pressure	180	8.524	12	PE100BL.180*16B.012
PE100BL	Irrigation/Pressure	25	0.237	6	PE100BL.25*25B.006MX
PE100BL	Irrigation/Pressure	250	13.545	12	PE100BL.250*12B.012
PE100BL	Irrigation/Pressure	250	16.399	12	PE100BL.250*16B.012
PE100BL	Irrigation/Pressure	32	0.271	200	PE100BL.32*16B.200
PE100BL	Irrigation/Pressure	32	0.551	6	PE100BL.32*25B.006MX
PE100BL	Irrigation/Pressure	40	0.65	6	PE100BL.40*25B.006MX
PE100BL	Irrigation/Pressure	50	0.937	6	PE100BL.50*25B.006MX
PE100BL	Irrigation/Pressure	63	1.059	100	PE100BL.63*16B.100
PE100BL	Irrigation/Pressure	63	1.414	6	PE100BL.63*25B.006MX
PE100BL	Irrigation/Pressure	110	4.5	6	PE100BL110*25B.006MX
PE100BL	Irrigation/Pressure	20	0.19	6	PE100BL20*25B.006MX
PE100BL	Irrigation/Pressure	25	0.237	6	PE100BL25*25B.006MX
PE100BL	Irrigation/Pressure	32	0.382	6	PE100BL32*25B.006MX
PE100BL	Irrigation/Pressure	50	0.768	6	PE100BL50*25B.006MX
PE100BS	Irrigation/Pressure	25	0.171	6	PE100BS.25*16B.006
PE100BS	Irrigation/Pressure	32	0.271	6	PE100BS.32*16B.006
PE100BS	Irrigation/Pressure	40	0.431	6	PE100BS.40*16B.006
PE100BS	Irrigation/Pressure	50	0.669	6	PE100BS.50*16B.006
PE100BS	Irrigation/Pressure	63	1.059	6	PE100BS.63*16B.006
PE100BS	Irrigation/Pressure	63	1.059	50	PE100BS.63*16B.050
PE100BS	Irrigation/Pressure	63	1.059	100	PE100BS.63*16B.100
PE100BS	Irrigation/Pressure	75	1.478	6	PE100BS.75*16B.006
PE100CR	Irrigation/Pressure	40	0.431	6	PE100CR.40*16B.006
PE100CR	Irrigation/Pressure	40	0.431	25	PE100CR.40*16B.025
PE100CR	Irrigation/Pressure	40	0.431	50	PE100CR.40*16B.050
PE100CR	Irrigation/Pressure	50	0.669	100	PE100CR.50*16B.100
PE100CR	Irrigation/Pressure	63	1.059	100	PE100CR.63*16B.100
PE100CS	Irrigation/Pressure	160	6.744	12	PE100CS.160*16B.012
PE100CS	Irrigation/Pressure	40	0.431	6	PE100CS.40*16B.006
PE100CS	Irrigation/Pressure	40	0.431	25	PE100CS.40*16B.025
PE100CS	Irrigation/Pressure	40	0.431	50	PE100CS.40*16B.050
PE100CS	Irrigation/Pressure	40	0.431	100	PE100CS.40*16B.100
PE100CS	Irrigation/Pressure	50	0.669	50	PE100CS.50*16B.050
PE100CS	Irrigation/Pressure	50	0.669	100	PE100CS.50*16B.100
PE100CS	Irrigation/Pressure	63	1.059	100	PE100CS.63*16B.100
PE100CS	Irrigation/Pressure	90	2.143	100	PE100CS.90*16B.100
K Pipe	Irrigation	32	0.35	66	K.PIPE32.066
K Pipe	Irrigation	32	0.35	100	K.PIPE32.100.EX
K Pipe	Irrigation	32	0.35	120	K.PIPE32.120
K Pipe	Irrigation	32	0.35	150	K.PIPE32.150
K Pipe	Irrigation	32	0.35	375	K.PIPE32.375FT
K Pipe	Irrigation	32	0.35	66	K.PIPE32.3PP.066
K Pipe	Irrigation	32	0.35	76	K.PIPE32.4PP.076
K Pipe	Irrigation	32	0.35	116	K.PIPE32.5PP.116
K Pipe	Irrigation	32	0.35	100	K.PIPE32FP.100
K Pipe	Irrigation	40	0.405	50	K.PIPE40.050
K Pipe	Irrigation	40	0.405	100	K.PIPE40.100.EX

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
K Pipe	Irrigation	40	0.405	120	K.PIPE40.120
K Pipe	Irrigation	40	0.405	125	K.PIPE40.125
K Pipe	Irrigation	40	0.405	150	K.PIPE40.150.EX
K Pipe	Irrigation	40	0.405	200	K.PIPE40.200
K Pipe	Irrigation	40	0.405	100	K.PIPE40.300FT
K Pipe	Irrigation	40	0.405	104	K.PIPE40.5PP.104
K Pipe	Irrigation	45	0.45	90	K.PIPE45.275FT
K Pipe	Irrigation	50	0.478	80	K.PIPE50.250FT
LAT	Irrigation	25	0.162	50	LAT25.050P
LD	Irrigation	20	0.211	1.2	LD20.001.2
LD	Irrigation	20	0.211	5	LD20.005
LD	Irrigation	25	0.271	1.5	LD25.001.5
LD	Irrigation	25	0.271	125	LD25.125
LD	Irrigation	40	0.391	5	LD40.005
LD	Irrigation	50	0.531	1	LD50.001
LD	Irrigation	50	0.531	1.83	LD50.001.83
LD	Irrigation	50	0.531	3	LD50.003
LD	Irrigation	50	0.531	3.92	LD50.003.92
LD	Irrigation	50	0.531	4	LD50.004
LD	Irrigation	50	0.531	4.5	LD50.004.5
LD	Irrigation	50	0.531	4.95	LD50.004.95
LD	Irrigation	50	0.531	6	LD50.006
MD	Irrigation/water supply	110	2.19	6	MD110*08B.006
MD	Irrigation/water supply	110	2.345	50	MD110*09B.050
MD	Irrigation/water supply	110	2.648	12	MD110*10B.012
MD	Irrigation/water supply	110	2.648	165	MD110*10B.165
MD	Irrigation/water supply	125	3.411	400	MD125*10B.400
MD	Irrigation/water supply	160	5.58	6	MD160*10B.006
MD	Irrigation/water supply	160	5.58	15	MD160*10B.015
MD	Irrigation/water supply	20	0.096	50	MD20*09B.050
MD	Irrigation/water supply	20	0.112	100	MD20*12B.100
MD	Irrigation/water supply	25	0.108	50	MD25*08B.050
MD	Irrigation/water supply	50	0.374	6	MD50*06B.006
MD	Irrigation/water supply	50	0.414	12	MD50*09B.012
MD	Irrigation/water supply	50	0.672	50	MD50*12B.050
MD	Irrigation/water supply	63	0.64	200	MD63*06B.200
MD	Irrigation/water supply	63	0.67	6	MD63*08B.006
MD	Irrigation/water supply	63	0.765	6	MD63*09B.006
MD	Irrigation/water supply	63	1.062	200	MD63*12B.200
MD	Irrigation/water supply	75	0.832	25	MD75*06B.025
MD	Irrigation/water supply	75	0.832	100	MD75*06B.100
MD	Irrigation/water supply	75	1.033	6	MD75*08B.006
MD	Irrigation/water supply	90	1.472	200	MD90*08B.200
MD	Irrigation/water supply	90	1.571	50	MD90*09B.050
MDBL	Irrigation/water supply	20	0.105	25	MDBL20*12B.025
MDBL	Irrigation/water supply	20	0.105	50	MDBL20*12B.050
MDBL	Irrigation/water supply	20	0.105	200	MDBL20*12B.200
MDED	Irrigation/water supply	90	1.472	100	MDED90*08B.100
MDEF	Irrigation/water supply	90	1.421	55	MDEF90.055
MDEF	Irrigation/water supply	32	0.174	500	MDFD32*08B.500
MDID	Irrigation/water supply	50	0.436	100	MDFD50*08B.100VN
MDID	Irrigation/water supply	15	0.078	25	MDID15*09B.025
MDID	Irrigation/water supply	15	0.078	50	MDID15*09B.050
MDID	Irrigation/water supply	15	0.078	100	MDID15*09B.100
MDID	Irrigation/water supply	15	0.085	25	MDID15*12B.025
MDID	Irrigation/water supply	15	0.085	50	MDID15*12B.050

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
MDID	Irrigation/water supply	20	0.124	25	MDID20*09B.025
MDID	Irrigation/water supply	20	0.124	50	MDID20*09B.050
MDID	Irrigation/water supply	20	0.161	25	MDID20*12B.025
MDID	Irrigation/water supply	20	0.161	50	MDID20*12B.050
MDID	Irrigation/water supply	20	0.161	100	MDID20*12B.100
MDID	Irrigation/water supply	25	0.186	25	MDID25*09B.025
MDID	Irrigation/water supply	25	0.186	50	MDID25*09B.050
MDID	Irrigation/water supply	25	0.186	100	MDID25*09B.100
MDID	Irrigation/water supply	25	0.186	200	MDID25*09B.200
MDID	Irrigation/water supply	25	0.255	25	MDID25*12B.025
MDID	Irrigation/water supply	25	0.255	50	MDID25*12B.050
MDID	Irrigation/water supply	25	0.255	100	MDID25*12B.100
MDID	Irrigation/water supply	32	0.274	25	MDID32*09B.025
MDID	Irrigation/water supply	32	0.274	50	MDID32*09B.050
MDID	Irrigation/water supply	32	0.274	100	MDID32*09B.100
MDID	Irrigation/water supply	32	0.274	200	MDID32*09B.200
MDID	Irrigation/water supply	32	0.348	25	MDID32*12B.025
MDID	Irrigation/water supply	32	0.348	50	MDID32*12B.050
MDID	Irrigation/water supply	32	0.348	100	MDID32*12B.100
MDID	Irrigation/water supply	40	0.267	100	MDID40*06B.100
MDID	Irrigation/water supply	40	0.373	25	MDID40*09B.025
MDID	Irrigation/water supply	40	0.373	50	MDID40*09B.050
MDID	Irrigation/water supply	40	0.373	100	MDID40*09B.100
MDID	Irrigation/water supply	40	0.49	25	MDID40*12B.025
MDID	Irrigation/water supply	40	0.49	50	MDID40*12B.050
MDID	Irrigation/water supply	40	0.49	100	MDID40*12B.100
MDID	Irrigation/water supply	40	0.49	200	MDID40*12B.200
MDID	Irrigation/water supply	50	0.691	25	MDID50*09B.025
MDID	Irrigation/water supply	50	0.691	50	MDID50*09B.050
MDID	Irrigation/water supply	50	0.691	100	MDID50*09B.100
MDID	Irrigation/water supply	50	0.931	25	MDID50*12B.025
MDID	Irrigation/water supply	50	0.931	50	MDID50*12B.050
MDID	Irrigation/water supply	50	0.931	100	MDID50*12B.100
MDPUR	Effluent	32	0.174	50	MDPUR32*8B.050
MDY	Gas Pipe	160	4.577	12	MDY160*SDR17.012
MDY	Gas Pipe	200	6.987	12	MDY200*SDR17.012
PE100	Water supply	110	1.785	15	PE100.110*08B.015
PE100	Water supply	110	1.785	100	PE100.110*08B.100
PE100	Water supply	110	2.183	6	PE100.110*10B.006
PE100	Water supply	110	2.183	15	PE100.110*10B.015
PE100	Water supply	110	3.177	15	PE100.110*16B.015
PE100	Water supply	110	3.177	50	PE100.110*16B.050
PE100	Water supply	125	1.84	18	PE100.125*06B.018
PE100	Water supply	125	2.785	15	PE100.125*10B.015
PE100	Water supply	125	3.403	15	PE100.125*12B.015
PE100	Water supply	125	4.745	12	PE100.125*20B.012
PE100	Water supply	140	2.337	15	PE100.140*06B.015
PE100	Water supply	140	2.857	6	PE100.140*08B.006
PE100	Water supply	140	2.857	12	PE100.140*08B.012
PE100	Water supply	140	3.496	15	PE100.140*10B.015
PE100	Water supply	140	4.261	12	PE100.140*12B.012
PE100	Water supply	140	4.261	15	PE100.140*12B.015
PE100	Water supply	160	3.065	12	PE100.160*06B.012
PE100	Water supply	160	3.065	15	PE100.160*06B.015
PE100	Water supply	160	3.065	18	PE100.160*06B.018
PE100	Water supply	160	3.065	22	PE100.160*06B.022

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
PE100	Water supply	160	3.747	12	PE100.160*08B.012
PE100	Water supply	160	4.563	18	PE100.160*10B.018
PE100	Water supply	160	6.744	15	PE100.160*16B.015
PE100	Water supply	180	5.772	18	PE100.180*10B.018
PE100	Water supply	180	7.061	12	PE100.180*12B.012
PE100	Water supply	180	7.061	18	PE100.180*12B.018
PE100	Water supply	180	8.524	2.5	PE100.180*16B.002.5
PE100	Water supply	200	4.733	22	PE100.200*06B.022
PE100	Water supply	200	5.833	6	PE100.200*08B.006
PE100	Water supply	200	5.833	12	PE100.200*08B.012
PE100	Water supply	200	5.833	22	PE100.200*08B.022
PE100	Water supply	200	10.511	6	PE100.200*16B.006
PE100	Water supply	200	10.511	12	PE100.200*16B.012
PE100	Water supply	225	5.712	6	PE100.225*06B.006
PE100	Water supply	225	5.712	15	PE100.225*06B.015
PE100	Water supply	225	5.712	18	PE100.225*06B.018
PE100	Water supply	225	9.033	6	PE100.225*10B.006
PE100	Water supply	225	10.996	18	PE100.225*12B.018
PE100	Water supply	25	0.171	100	PE100.25*16B.100
PE100	Water supply	25	0.171	200	PE100.25*16B.200
PE100	Water supply	250	7.3858	12	PE100.250*06B.012
PE100	Water supply	250	7.3858	22	PE100.250*06B.022
PE100	Water supply	250	9.04	22	PE100.250*08B.022
PE100	Water supply	250	11.094	6	PE100.250*10B.006
PE100	Water supply	250	13.545	2.5	PE100.250*12B.002.5
PE100	Water supply	250	13.545	12	PE100.250*12B.012
PE100	Water supply	280	9.192	18	PE100.280*06B.018
PE100	Water supply	280	9.192	22	PE100.280*06B.022
PE100	Water supply	280	16.972	12	PE100.280*12B.012
PE100	Water supply	280	16.972	22	PE100.280*12B.022
PE100	Water supply	315	11.71	6	PE100.315*06B.006
PE100	Water supply	315	11.71	6	PE100.315*06B.006ST
PE100	Water supply	315	11.71	22	PE100.315*06B.022
PE100	Water supply	315	14.312	22	PE100.315*08B.022
PE100	Water supply	315	17.613	6	PE100.315*10B.006
PE100	Water supply	315	17.613	12	PE100.315*10B.012
PE100	Water supply	315	21.509	22	PE100.315*12B.022
PE100	Water supply	32	0.174	50	PE100.32*10B.050
PE100	Water supply	32	0.174	100	PE100.32*10B.100
PE100	Water supply	32	0.271	75	PE100.32*16B.075
PE100	Water supply	32	0.271	500	PE100.32*16B.200
PE100	Water supply	355	14.797	22	PE100.355*06B.022
PE100	Water supply	355	18.169	22	PE100.355*08B.022
PE100	Water supply	355	22.413	6	PE100.355*10B.006
PE100	Water supply	355	22.413	12	PE100.355*10B.012
PE100	Water supply	355	22.413	22	PE100.355*10B.022
PE100	Water supply	355	32.958	12	PE100.355*16B.012
PE100	Water supply	355	32.958	22	PE100.355*16B.022
PE100	Water supply	400	18.764	12	PE100.400*06B.012
PE100	Water supply	400	18.764	22	PE100.400*06B.022
PE100	Water supply	400	23.169	12	PE100.400*08B.012
PE100	Water supply	400	23.169	22	PE100.400*08B.022
PE100	Water supply	400	28.327	22	PE100.400*10B.022
PE100	Water supply	450	23.727	22	PE100.450*06B.022
PE100	Water supply	450	35.891	22	PE100.450*10B.022
PE100	Water supply	450	43.804	6	PE100.450*12B.006

Series	Application	DN Nominal Size (mm)	Density (kg/m)	Length (m)	Product Code
PE100	Water supply	450	43.804	12	PE100.450*12B.012
PE100	Water supply	450	43.804	22	PE100.450*12B.022
PE100	Water supply	450	52.992	12	PE100.450*16B.012
PE100	Water supply	50	0.436	50	PE100.50*10B.050
PE100	Water supply	50	0.768	100	PE100.50*20B.100
PE100	Water supply	500	29.267	22	PE100.500*06B.022
PE100	Water supply	500	36.151	22	PE100.500*08B.022
PE100	Water supply	560	34.815	22	PE100.560*04B.022
PE100	Water supply	63	0.557	100	PE100.63*08B.100
PE100	Water supply	63	0.557	200	PE100.63*08B.200
PE100	Water supply	63	0.723	6	PE100.63*10B.006
PE100	Water supply	63	1.059	50	PE100.63*16B.050
PE100	Water supply	63	1.059	100	PE100.63*16B.100
PE100	Water supply	630	30.187	22	PE100.630*04B.022
PE100	Water supply	630	46.485	12	PE100.630*06B.012
PE100	Water supply	630	46.485	22	PE100.630*06B.022
PE100	Water supply	630	57.156	14	PE100.630*08B.014
PE100	Water supply	630	85.708	22	PE100.630*12B.022
PE100	Water supply	90	1.467	80	PE100.90*10B.080
PE100	Water supply	90	1.467	105	PE100.90*10B.105
PE100	Water supply	90	1.467	110	PE100.90*10B.110
PE100	Water supply	90	1.467	120	PE100.90*10B.120
PE100	Water supply	90	1.467	130	PE100.90*10B.130
PE100	Water supply	90	1.467	140	PE100.90*10B.140
PE100	Water supply	90	1.467	150	PE100.90*10B.150
PE100	Water supply	90	1.467	152	PE100.90*10B.152
PE100	Water supply	90	1.467	170	PE100.90*10B.170
PE100	Water supply	90	1.467	180	PE100.90*10B.180
PE100	Water supply	90	1.467	184	PE100.90*10B.184
PE100	Water supply	90	1.467	195	PE100.90*10B.195
PE100	Water supply	90	1.467	200	PE100.90*10B.200
PE100	Water supply	90	1.467	220	PE100.90*10B.220
PE100	Water supply	90	1.467	230	PE100.90*10B.230
PE100	Water supply	90	1.467	245	PE100.90*10B.245
PE100	Water supply	90	1.467	270	PE100.90*10B.270
PE100	Water supply	90	2.143	6	PE100.90*16B.006
PE100	Water supply	90	2.143	50	PE100.90*16B.050
PE100BS	Water supply	125	3.403	12	PE100BS.125*12B.012
PE100BS	Water supply	125	3.403	15	PE100BS.125*12B.015
PE100BS	Water supply	125	4.122	6	PE100BS.125*16B.006
PE100BS	Water supply	180	5.563	12	PE100BS.180*12B.012
PE100BS	Water supply	200	10.511	12	PE100BS.200*16B.012
PE100BS	Water supply	225	10.996	12	PE100BS.225*12B.012
PE100BS	Water supply	250	13.545	12	PE100BS.250*12B.012
PE100BS	Water supply	90	1.76	100	PE100BS.90*12B.100
PE100CS	Sewer Mains	125	2.785	12	PE100CS.125*10B.012
PE100CS	Sewer Mains	125	3.403	12	PE100CS.125*12B.012
PE100CS	Sewer Mains	160	3.403	12	PE100CS.160*12B.012
PE100CS	Sewer Mains	40	0.431	200	PE100CS.40*16B.200
PE100CS	Sewer Mains	63	1.414	100	PE100CS.63*25B.100
PE100CS	Sewer Mains	90	2.143	12	PE100CS.90*16B.012
PE100LJ	Waste water	250	16.36	12	PE100LJ.250*16B.012
PE100LS	Waste water	125	3.50	12	PE100LS.125*12B.012

Sustainable Manufacturing

RXP is committed to creating environmentally sustainable processes and products and was the first plastics manufacturer in New Zealand to achieve ISO14001 registration. We are also Best Environmental Practice certified for our entire range of manufactured uPVC systems. This means we get our raw materials from sustainable and responsible sources, continuously work on our manufacturing processes to reduce our environmental footprint and accept our products back at the end of their useful life for recycling.



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