Owner: AVK Plast A/S
No.: MD-26002-EN
EPD tool: AVK Plast EPD tool (T26001)
Tool version: V.1
Issued: 22-01-2026
Valid to: 22-01-2031

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**

Owner of declaration
AVK Plast A/S
Øster Vedstedvej 26A, 6760, Ribe
Denmark
VAT no.: 78205628

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

☒ Product specific
☐ Average
☒ Worst Case

Declared product(s)
Five (5) worst-case product groups and one (1) single product are declared:

Product Group 1(worst-case): PP, PE
Product Group 2(worst-case): POM, PBT
Product Group 3(worst-case): rPP, rPE, rABS, rASA, rTPU [rPlast]
Product Group 4(worst-case): PA6, PA66
Product Group 5(worst-case): ABS, ASA, PS
Product specific: TPU
The EPD is a reference EPD to AVK Plast EPD tool (T26001).

Number of declared datasets/product variations: 6

Production site
Øster Vedstedvej 26A, 6760, Ribe, Denmark

Use of Guarantees of Origin
☐ No certificates used
☒ Electricity covered by GoO
☐ Biogas covered by GoO

Declared/ functional unit
1 kg.

Year of production site data (A3)
2023

EPD version
Version 1.

Declaration developed using AVK Plast EPD tool (T26001) V.1

Data collection, processing and registration done by: Philip Mckay Bernsen

Reviewed by: Morten Søes Kokborg

☐ internal ☒ external

Third party verifier:

Morten Søes Kokborg

Issued: 22-01-2026

Valid to: 22-01-2031

Basis of calculation
This EPD is developed and verified in accordance with the European standard EN 15804+A2.

EPD tools
This EPD has been prepared using an automated EPD tool. The LCA model and tool have been third-party verified. User-defined inputs, such as primary data, are independently verified by an internal auditor. Users of EPD tools are subject to an annual audit by EPD Denmark.

Comparability
EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity
This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use
The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

EPD type
☐Cradle-to-gate with modules C1-C4 and D
☒Cradle-to-gate with options, modules C1-C4 and D
☐Cradle-to-grave and module D
☐Cradle-to-gate
☐Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

Independent verification of the tool on which declaration and data is based, according to EN ISO 14025:2010

☐ internal ☒ external

Third party verifier:

Morten Søes Kokborg

Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	**X**	**X**	**X**	**X**	ND	ND	ND	MD	ND	ND	ND	**X**	**X**	**X**	**X**	**X**

Product information

Product description

The products declared in this reference EPD are injection moulded products (UN CPC code 36) manufactured by AVK Plast - either under own license or contractual agreement - at their production facility in Ribe, Denmark.

The reference EPD includes six (6) result sets: five (5) grouped sets representing worst-case product groups, as defined in Chapter 4.1.3 of EPD Denmark Technical Rules and Guidelines, Version 1.0, and one (1) product-specific set.

Each result set represents a subset of 15 primary input materials used by AVK Plast A/S in the manufacture of injection-moulded products. Together, these six sets cover all products produced at the AVK Plast A/S manufacturing facility using these primary materials. The following table lists the declared products/result sets and the corresponding primary materials included in each.

Declared products / result sets	Primary materials*
Product Group 1	Polypropylene (PP), Polyethylene (PE)
Product Group 2	Polyoxymethylene (POM), Polybutylene terephthalate (PBT)
Product Group 3	Recycled polypropylene (rPP), Recycled polyethylene (rPE), Recycled acrylonitrile butadiene styrene (rABS), Recycled acrylonitrile styrene acrylate (rASA), Recycled thermoplastic polyurethane (rTPU)
Product Group 4	Polyamide 6 (PA6), Polyamide 66 (PA66)
Product Group 5	Acrylonitrile butadiene styrene (ABS), Acrylonitrile styrene acrylate (ASA), Polystyrene (PS)
TPU (Product specific)	Thermoplastic polyurethane (TPU)

*See the section: *Additional Information* for information on which specific material represents the various worst-case indicator results for the declared products.

The product groups are categorized based on material characteristics, including chemical family, mechanical properties, and typical applications.

All result sets are calculated using the same quantity and type of additives, which can be adjusted in the EPD tool alongside the choice of primary material.

The main product components for the declared products are shown in the table below.

Material	Weight-% of declared product
Plastic granulate	77%
Masterbatch	3%
Talcum	20%

Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below.

Material	Weight of packaging material (kg)	Weight-% of packaging
Wooden pallet	0.001	0.10%
LDPE	0.001	0.13%
Paper and cardboard	0.015	1.46%
Total	**0.017**	**1.69%**

Representativity

This declaration, including data collection and the modelled foreground system including results, represents the manufacturing of the injection moulded products and components on the production site located in Ribe, Denmark.

Plastic granulates and additives have a significant impact on the environmental performance of injection-moulded products. To account for these variations, a dedicated EPD tool has been developed, verified, and applied in creating this EPD. The tool enables the efficient generation of product-specific, pre-verified project EPDs for AVK Plast A/S's production in Ribe. These EPDs accurately reflect the selected granulate and can incorporate data on specific granulate mixes, additive use, as well as transport modes and distances.

For a project-specific EPD for a product manufactured at AVK Plast A/S, please contact the manufacturer.

Product-specific data are based on information collected during 2023. Background data are sourced from ecoinvent v. 3.11. All datasets are less than 10 years old, and most are only a few years old. In general, the background datasets used are of high quality and representativity.

Hazardous substances

The product does not contain substances listed on the "Candidate List of Substances of Very High Concern for authorisation"

(http://echa.europa.eu/candidate-list-table)

Product(s) use

The injection-moulded plastic products are customized components for machinery, enclosures, and assemblies.

These products are designed to meet specific mechanical, thermal, and chemical requirements, and are tailored to meet the requirements of each specific application and industry in which they are used, through material selection and additive use.

Essential characteristics

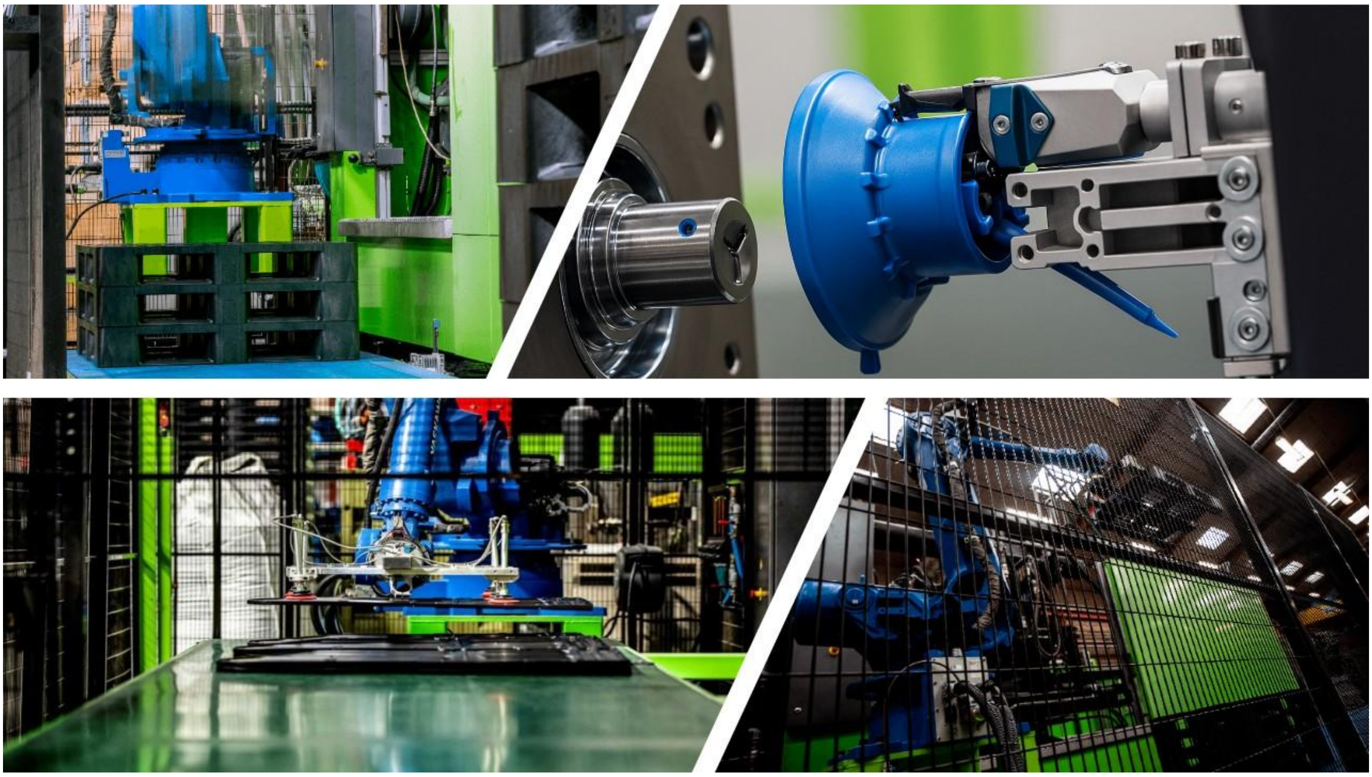
The products declared within this EPD are not covered by any harmonized technical specification. Further technical information can be obtained by contacting the manufacturer or on the manufacturer's website:

https://avkplast.dk/

Reference Service Life (RSL)

Not defined.

Picture of product(s)



LCA background

Declared unit

The LCI and LCIA results in this EPD relate to 1 kg injection moulded product.

Name	Value	Unit
Declared unit	1	kg

Functional unit

Not defined.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804:2012+A2:2019.

Energy modelling principles

AVK Plast A/S uses GoO-certified electricity from wind power supplied by Energi Danmark to cover its entire production. The trading of renewable electricity is documented through Guarantees of Origin (GoO), issued in accordance with Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009 on the promotion of renewable energy, which repealed Directives 2001/77/EC and 2003/30/EC. Centrica Energy Trading A/S manages the GoO accounts, which are subject to external audit.

Since the GoO does not specify the type of wind energy, a conservative approach has been applied by modeling a worst-case scenario using datasets from the ecoinvent database.

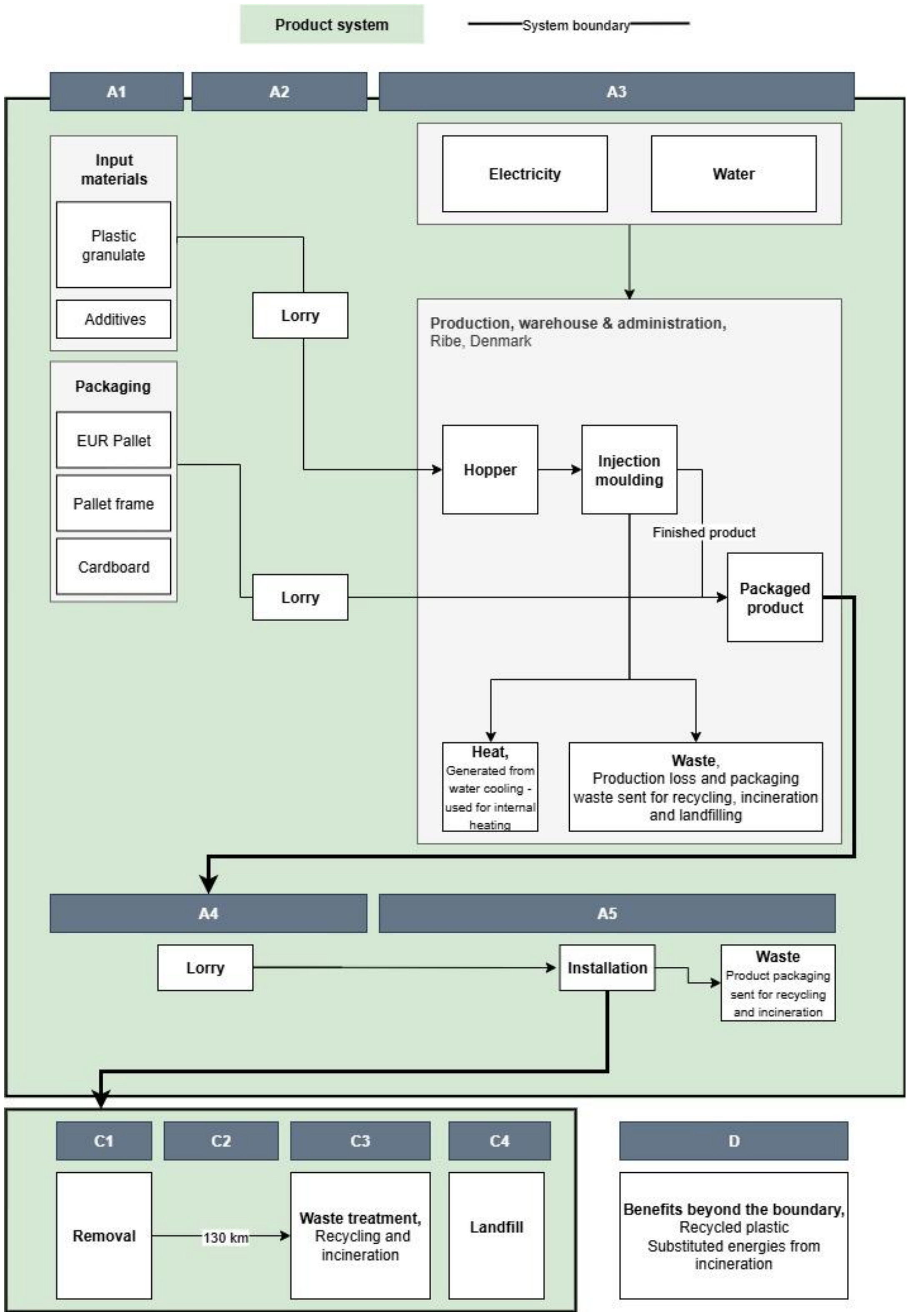
Information about the electricity mix in the foreground system:

Energy mix	EF	Unit
Wind mix – worst case, DK, ref. year 2023	0.0215	kg CO_2e/kWh

Background system:

Upstream processes are modelled using European average energy mixes. Downstream processes are modelled using European and national average energy mixes.

Flowdiagram



System boundary

This EPD is based on a cradle-to-gate LCA with options A4 and A5, in which 100 weight-% has been accounted for. The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials
A2 – Transport to the production site
A3 – Manufacturing processes

In **A1**, the extraction of raw materials used to produce granulate and additives is covered, along with their transportation to the respective production sites. This module also includes the production of the granulate and additives, as well as their required packaging.

A2 addresses the transportation requirements for each material with a weighted average transport distance. The material is transported by truck from various European countries to the production facility in Ribe.

A3 covers the manufacturing stage of the product. During this process, a mixture of plastic granulate and a color/additive concentrate known as "Masterbatch" (MB) is combined in a hopper. The blended material is then injection-moulded under high pressure into a steel mould, which contains the negative form of the final product. **A3** also covers the production and sourcing of transport packaging used for outbound delivery to customers. Utility consumptions such as electricity and water use, for the production year 2023 are allocated to the declared products using a mass-based approach. Additionally, **A3** accounts for waste processing related to a production loss of 0.6% and transport packaging originating from A1. All waste is modeled up to the "end-of-waste" state or final disposal.

A4 includes transportation of the product over a distance of 100 km from the production site to the customer, using a lorry with a gross vehicle weight >32 metric tons (Mt), compliant with EURO 6 emission standards.

A5 covers the waste management of the product packaging reflecting typical treatment pathways and recycling rates for packaging materials from Europe.

End of life (C1-C4):

For the modelling of **C1** and **C2** default values from Table 4, Section 4.8.4 of the Product Category Rules (PCR) for Construction Products (PCR 2019:14, Version 2.0.1) are applied. This entails that for the demolition/deconstruction of the injection moulded products in **C1**, a diesel consumption for machinery used to deconstruct the injection moulded product is modeled at 1.1 kWh per tonne of injection-moulded product.

In Module **C2** (Transport), a conservative transport distance of 130 km is assumed, using a 16–32 Mt EURO 5 lorry, as specified in the same PCR reference.

In Module **C3** and **C4** waste treatment pathways are based on Plastic Europes's 2024 edition of the "Circular Economy for Plastics – A European Analysis" report that provides an overview of post-consumer plastics end-of-life pathways. With this as the basis, the end-of-life pathways for the product are then further adapted to account for specific waste treatment conditions for the material and additive content. For all declared products, 100% of the material is sorted in stage **C3**. A portion of Product Group 1 and Product Group 2 is recycled during **C3**, while the remaining declared products are directed to incineration or landfill in stage **C4**. Incineration is reported under **C4** because the energy recovery efficiency is below 60%, which reflects typical performance of European municipal waste incineration facilities. Detailed end-of-life distributions for each declared product are provided in the End-of-Life table within the section Technical Information on Scenarios under Additional Information.

Module **D** accounts for the benefits associated with the substitution of virgin granulate by the recovered material from **C3**, as well as the energy recovery from incineration in **C4** through a municipal solid waste incinerator (MSWI). Electricity and thermal energy generated from incineration is assumed to substitute electricity in an average European electricity mix and district heating from natural gas

LCA results

The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

Product Group 1: PP, PE

ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 1: PP, PE									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	[kg CO_2 eq.]	2.44E+00	1.05E-02	3.00E-02	3.97E-04	2.52E-02	1.62E-01	1.78E+00	-1.10E+00
GWP-fossil	[kg CO_2 eq.]	2.46E+00	1.05E-02	3.17E-03	3.97E-04	2.52E-02	1.62E-01	1.78E+00	-1.09E+00
GWP-biogenic	[kg CO_2 eq.]	-2.68E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.57E-03
GWP-luluc	[kg CO_2 eq.]	2.18E-03	3.74E-06	4.15E-07	3.45E-08	8.24E-06	3.39E-04	5.65E-05	-7.58E-04
ODP	[kg CFC 11 eq.]	7.34E-08	2.19E-10	1.35E-11	6.07E-12	5.00E-10	2.32E-09	3.52E-09	-4.86E-08
AP	[mol H^+ eq.]	8.48E-03	2.49E-05	3.50E-06	3.58E-06	7.87E-05	9.06E-04	5.16E-04	-2.93E-03
EP-freshwater	[kg P eq.]	5.19E-04	7.41E-07	1.34E-07	1.16E-08	1.68E-06	9.03E-05	9.92E-05	-2.07E-04
EP-marine	[kg N eq.]	1.81E-03	6.52E-06	1.44E-06	1.66E-06	2.65E-05	2.51E-04	6.30E-04	-6.77E-04
EP-terrestrial	[mol N eq.]	1.88E-02	7.05E-05	1.30E-05	1.82E-05	2.89E-04	1.94E-03	2.12E-03	-6.88E-03
POCP	[kg NMVOC eq.]	1.18E-02	4.32E-05	4.30E-06	5.42E-06	1.23E-04	6.19E-04	5.87E-04	-5.42E-03
ADPm[1]	[kg Sb eq.]	1.51E-05	2.94E-08	2.90E-09	1.38E-10	8.03E-08	1.93E-06	4.87E-07	-4.67E-06
ADPf[1]	[MJ]	6.70E+01	1.58E-01	9.74E-03	5.19E-03	3.53E-01	2.38E+00	1.68E+00	-3.10E+01
WDP[1]	[m^3 world eq. deprived]	5.74E-01	9.67E-04	4.26E-04	1.52E-05	1.97E-03	7.33E-02	3.22E-02	-3.04E-01
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 1: PP, PE									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	[Disease incidence]	1.13E-07	1.03E-09	1.32E-10	1.02E-10	1.98E-09	3.42E-08	3.17E-07	-1.99E-08
IRP[2]	[kBq U235 eq.]	8.98E-02	1.92E-04	5.59E-05	2.32E-06	4.53E-04	5.04E-02	8.29E-03	-1.13E-01
ETP-fw[1]	[CTUe]	2.41E+01	3.75E-02	1.51E-02	7.35E-04	9.49E-02	1.99E+00	6.90E+00	-2.37E+00
HTP-c[1]	[CTUh]	1.47E-09	6.74E-11	5.33E-12	1.55E-12	1.76E-10	4.10E-10	5.54E-10	-4.47E-10
HTP-nc[1]	[CTUh]	1.80E-08	1.04E-10	2.72E-11	7.04E-13	2.27E-10	3.58E-08	3.98E-09	-5.85E-09
SQP[1]	-	8.33E+00	1.59E-01	4.55E-03	3.64E-04	2.10E-01	1.62E+00	5.33E-01	-5.37E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER 1 KG – GROUP 1: PP, PE

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	[MJ]	5.22E+00	0.00E+00	5.69E-02	3.17E-05	5.99E-03	5.82E-02	9.93E-02	0.00E+00
PERM	[MJ]	2.03E-01	0.00E+00	-2.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	5.43E+00	0.00E+00	-1.46E-01	3.17E-05	5.99E-03	5.82E-02	9.93E-02	0.00E+00
PENRE	[MJ]	6.52E+01	1.58E-01	4.21E-02	5.19E-03	3.53E-01	5.00E-01	1.93E+00	0.00E+00
PENRM	[MJ]	3.34E+01	0.00E+00	-5.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	9.87E+01	1.58E-01	-1.33E-02	5.19E-03	3.53E-01	5.00E-01	1.93E+00	0.00E+00
SM	[kg]	2.63E-02	6.83E-05	5.34E-06	2.15E-06	1.62E-04	3.32E-03	7.61E-04	-9.15E-04
RSF	[MJ]	1.50E-03	8.62E-07	8.17E-08	5.63E-09	2.04E-06	2.61E-05	1.04E-05	-5.43E-04
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
FW	[m^3]	1.40E-02	2.37E-05	1.01E-05	3.71E-07	4.84E-05	3.83E-04	8.82E-04	-2.44E-03
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95*10^2$ or 195, while 1,12E-11 is the same as $1{,}12*10^{-11}$ or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 KG – GROUP 1: PP, PE

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	[kg]	1.26E-01	2.30E-04	1.50E-05	5.80E-06	5.09E-04	9.86E-03	6.34E-02	-9.84E-03
NHWD	[kg]	1.07E+01	4.60E-03	1.73E-02	7.92E-05	1.07E-02	2.18E-01	1.06E+00	-7.50E-01
RWD	[kg]	2.22E-05	4.75E-08	1.25E-08	5.70E-10	1.13E-07	5.44E-07	2.47E-06	-1.41E-05
CRU	[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
MFR	[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
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	2.89E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	7.98E-02	0.00E+00	0.00E+00	0.00E+00	5.58E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95*10^2$ or 195, while 1,12E-11 is the same as $1{,}12*10^{-11}$ or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER 1 KG – GROUP 1: PP, PE

Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0.00
Biogenic carbon centent in accompanying packagaing	[kg C]	7.80E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product Group 2: POM, PBT

ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 2: POM, PBT									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	3.15E+00	1.05E-02	3.00E-02	3.97E-04	2.52E-02	5.78E-02	1.65E+00	-2.00E-01
GWP-fossil	[kg CO_2 eq.]	3.17E+00	1.05E-02	3.17E-03	3.97E-04	2.52E-02	5.77E-02	1.65E+00	-1.98E-01
GWP-biogenic	[kg CO_2 eq.]	-2.68E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.46E-03
GWP-luluc	[kg CO_2 eq.]	3.09E-03	3.74E-06	4.15E-07	3.45E-08	8.24E-06	1.07E-04	6.50E-05	-2.55E-04
ODP	[kg CFC 11 eq.]	1.17E-05	2.19E-10	1.35E-11	6.07E-12	5.00E-10	3.51E-10	4.14E-09	-5.70E-09
AP	[mol H^+ eq.]	1.36E-02	2.49E-05	3.50E-06	3.58E-06	7.87E-05	3.15E-04	6.76E-04	-6.17E-04
EP-freshwater	[kg P eq.]	7.31E-04	7.41E-07	1.34E-07	1.16E-08	1.68E-06	2.53E-05	1.14E-04	-7.15E-05
EP-marine	[kg N eq.]	2.48E-03	6.52E-06	1.44E-06	1.66E-06	2.65E-05	1.57E-04	7.88E-04	-1.67E-04
EP-terrestrial	[mol N eq.]	2.56E-02	7.05E-05	1.30E-05	1.82E-05	2.89E-04	9.98E-04	2.84E-03	-1.66E-03
POCP	[kg NMVOC eq.]	1.33E-02	4.32E-05	4.30E-06	5.42E-06	1.23E-04	3.36E-04	7.35E-04	-7.40E-04
ADPm[1]	[kg Sb eq.]	2.91E-05	2.94E-08	2.90E-09	1.38E-10	8.03E-08	5.97E-07	5.74E-07	-4.03E-07
ADPf[1]	[MJ]	6.53E+01	1.58E-01	9.74E-03	5.19E-03	3.53E-01	5.00E-01	1.96E+00	-3.79E+00
WDP[1]	[m^3 world eq. deprived]	1.81E+01	9.67E-04	4.26E-04	1.52E-05	1.97E-03	1.53E-02	8.42E-02	-8.21E-02
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95*10^2$ or 195, while 1,12E-11 is the same as $1{,}12*10^{-11}$ or 0,0000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 2: POM, PBT									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	1.52E-07	1.32E-10	1.02E-10	1.98E-09	3.03E-08	3.61E-07	-4.17E-09	-4.17E-09
IRP[2]	[kBq U235 eq.]	4.04E-01	5.59E-05	2.32E-06	4.53E-04	2.17E-03	9.98E-03	-4.11E-02	-4.11E-02
ETP-fw[1]	[CTUe]	1.21E+01	1.51E-02	7.35E-04	9.49E-02	1.42E+00	1.02E+01	-5.83E-01	-5.83E-01
HTP-c[1]	[CTUh]	1.76E-09	5.33E-12	1.55E-12	1.76E-10	2.69E-10	5.07E-10	-2.51E-10	-2.51E-10
HTP-nc[1]	[CTUh]	3.19E-08	2.72E-11	7.04E-13	2.27E-10	2.27E-09	5.40E-09	-9.35E-10	-9.35E-10
SQP[1]	-	1.08E+01	4.55E-03	3.64E-04	2.10E-01	9.62E-01	6.14E-01	-3.62E+00	-3.62E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95*10^2$ or 195, while 1,12E-11 is the same as $1{,}12*10^{-11}$ or 0,0000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER 1 KG – GROUP 2: POM, PBT									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	6.37E+00	0.00E+00	5.69E-02	3.17E-05	5.99E-03	5.82E-02	1.07E-01	0.00E+00
PERM	[MJ]	2.03E-01	0.00E+00	-2.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	6.58E+00	0.00E+00	-1.46E-01	3.17E-05	5.99E-03	5.82E-02	1.07E-01	0.00E+00
PENRE	[MJ]	6.53E+01	1.58E-01	4.21E-02	5.19E-03	3.53E-01	5.00E-01	1.96E+00	0.00E+00
PENRM	[MJ]	1.84E+01	0.00E+00	-5.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	8.37E+01	1.58E-01	-1.33E-02	5.19E-03	3.53E-01	5.00E-01	1.96E+00	0.00E+00
SM	[kg]	2.99E-02	6.83E-05	5.34E-06	2.15E-06	1.62E-04	3.32E-03	7.27E-04	-7.00E-04
RSF	[MJ]	1.58E-03	8.62E-07	8.17E-08	5.63E-09	2.04E-06	2.61E-05	1.66E-05	-5.43E-04
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
FW	[m^3]	1.77E-02	2.37E-05	1.01E-05	3.71E-07	4.84E-05	3.83E-04	2.00E-03	-1.77E-03
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 KG – GROUP 2: POM, PBT									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	1.69E-01	2.30E-04	1.50E-05	5.80E-06	5.09E-04	9.86E-03	7.90E-02	-7.69E-03
NHWD	[kg]	6.82E+00	4.60E-03	1.73E-02	7.92E-05	1.07E-02	2.18E-01	1.16E+00	-6.02E-01
RWD	[kg]	3.96E-05	4.75E-08	1.25E-08	5.70E-10	1.13E-07	5.44E-07	2.66E-06	-8.51E-06
CRU	[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
MFR	[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
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	1.59E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	7.98E-02	0.00E+00	0.00E+00	0.00E+00	3.10E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER 1 KG – GROUP 2: POM, PBT		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0.00
Biogenic carbon centent in accompanying packagaing	[kg C]	7.80E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product Group 3: rPP, rPE, rABS, rASA, rTPU [rPlast]

ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 3: rPP, rPE, rABS, rASA, rTPU									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	6.19E-01	1.05E-02	3.00E-02	3.97E-04	2.52E-02	1.62E-01	1.78E+00	-7.17E-02
GWP-fossil	[kg CO_2 eq.]	6.44E-01	1.05E-02	3.17E-03	3.97E-04	2.52E-02	1.62E-01	1.78E+00	-2.29E-01
GWP-biogenic	[kg CO_2 eq.]	-2.68E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.82E-03
GWP-luluc	[kg CO_2 eq.]	1.25E-03	3.74E-06	4.15E-07	3.45E-08	8.24E-06	3.39E-04	5.65E-05	-2.86E-04
ODP	[kg CFC 11 eq.]	1.11E-08	2.19E-10	1.35E-11	6.07E-12	5.00E-10	3.51E-10	4.14E-09	-7.05E-09
AP	[mol H^+ eq.]	2.58E-03	2.49E-05	3.50E-06	3.58E-06	7.87E-05	3.15E-04	6.76E-04	-7.28E-04
EP-freshwater	[kg P eq.]	2.05E-04	7.41E-07	1.34E-07	1.16E-08	1.68E-06	2.53E-05	9.92E-05	-8.37E-05
EP-marine	[kg N eq.]	6.72E-04	6.52E-06	1.44E-06	1.66E-06	2.65E-05	1.57E-04	7.88E-04	-1.98E-04
EP-terrestrial	[mol N eq.]	6.44E-03	7.05E-05	1.30E-05	1.82E-05	2.89E-04	9.98E-04	2.84E-03	-1.97E-03
POCP	[kg NMVOC eq.]	2.44E-03	4.32E-05	4.30E-06	5.42E-06	1.23E-04	3.36E-04	7.35E-04	-8.60E-04
ADPm[1]	[kg Sb eq.]	6.30E-06	2.94E-08	2.90E-09	1.38E-10	8.03E-08	5.97E-07	5.74E-07	-4.42E-07
ADPf[1]	[MJ]	9.37E+00	1.58E-01	9.74E-03	5.19E-03	3.53E-01	5.00E-01	1.96E+00	-4.52E+00
WDP[1]	[m^3 world eq. deprived]	1.58E-01	9.67E-04	4.26E-04	1.52E-05	1.97E-03	1.53E-02	8.42E-02	-8.21E-02
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95*10^2$ or 195, while 1,12E-11 is the same as $1{,}12*10^{-11}$ or 0,0000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 3: rPP, rPE, rABS, rASA, rTPU

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	[Disease incidence]	3.49E-08	1.03E-09	1.32E-10	1.02E-10	1.98E-09	3.03E-08	3.61E-07	-4.58E-09
IRP[2]	[kBq U235 eq.]	1.00E-01	1.92E-04	5.59E-05	2.32E-06	4.53E-04	2.17E-03	9.98E-03	-4.11E-02
ETP-fw[1]	[CTUe]	2.66E+00	3.75E-02	1.51E-02	7.35E-04	9.49E-02	1.42E+00	1.02E+01	-6.45E-01
HTP-c[1]	[CTUh]	1.16E-09	6.74E-11	5.33E-12	1.55E-12	1.76E-10	3.06E-10	5.66E-10	-3.75E-10
HTP-nc[1]	[CTUh]	8.37E-09	1.04E-10	2.72E-11	7.04E-13	2.27E-10	2.27E-09	5.40E-09	-1.09E-09
SQP[1]	-	5.21E+00	1.59E-01	4.55E-03	3.64E-04	2.10E-01	9.62E-01	6.14E-01	-3.68E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^{2} or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER 1 KG – GROUP 3: rPP, rPE, rABS, rASA, rTPU

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	[MJ]	4.96E+00	0.00E+00	5.69E-02	3.17E-05	5.99E-03	5.82E-02	9.93E-02	0.00E+00
PERM	[MJ]	2.03E-01	0.00E+00	-2.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	5.16E+00	0.00E+00	-1.46E-01	3.17E-05	5.99E-03	5.82E-02	9.93E-02	0.00E+00
PENRE	[MJ]	9.38E+00	1.58E-01	4.21E-02	5.19E-03	3.53E-01	5.00E-01	1.93E+00	0.00E+00
PENRM	[MJ]	3.34E+01	0.00E+00	-5.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	4.28E+01	1.58E-01	-1.33E-02	5.19E-03	3.53E-01	5.00E-01	1.93E+00	0.00E+00
SM	[kg]	8.58E-01	6.83E-05	5.34E-06	2.15E-06	1.62E-04	3.32E-03	7.61E-04	-9.15E-04
RSF	[MJ]	1.49E-03	8.62E-07	8.17E-08	5.63E-09	2.04E-06	2.61E-05	1.04E-05	-5.43E-04
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
FW	[m^{3}]	4.03E-03	2.37E-05	1.01E-05	3.71E-07	4.84E-05	3.83E-04	8.82E-04	-2.44E-03
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^{2} or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 KG – GROUP 3: rPP, rPE, rABS, rASA, rTPU									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2.77E-02	2.30E-04	1.50E-05	5.80E-06	5.09E-04	9.86E-03	6.34E-02	-8.65E-03
NHWD	[kg]	1.48E+00	4.60E-03	1.73E-02	7.92E-05	1.07E-02	2.18E-01	1.06E+00	-6.68E-01
RWD	[kg]	2.56E-05	4.75E-08	1.25E-08	5.70E-10	1.13E-07	5.44E-07	2.47E-06	-1.10E-05
CRU	[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
MFR	[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
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	2.89E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	7.98E-02	0.00E+00	0.00E+00	0.00E+00	5.58E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER 1 KG – GROUP 3: rPP, rPE, rABS, rASA, rTPU		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0.00
Biogenic carbon centent in accompanying packagaing	[kg C]	7.80E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product Group 4: PA6, PA66

ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 4: PA6, PA66									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	7.45E+00	1.05E-02	3.00E-02	3.97E-04	2.52E-02	5.78E-02	1.65E+00	-2.45E-01
GWP-fossil	[kg CO_2 eq.]	7.48E+00	1.05E-02	3.17E-03	3.97E-04	2.52E-02	5.77E-02	1.65E+00	-2.42E-01
GWP-biogenic	[kg CO_2 eq.]	-2.68E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.96E-03
GWP-luluc	[kg CO_2 eq.]	8.12E-04	3.74E-06	4.15E-07	3.45E-08	8.24E-06	1.07E-04	6.50E-05	-2.98E-04
ODP	[kg CFC 11 eq.]	6.74E-09	2.19E-10	1.35E-11	6.07E-12	5.00E-10	3.51E-10	4.14E-09	-7.05E-09
AP	[mol H^+ eq.]	2.92E-02	2.49E-05	3.50E-06	3.58E-06	7.87E-05	3.15E-04	6.76E-04	-7.28E-04
EP-freshwater	[kg P eq.]	3.91E-04	7.41E-07	1.34E-07	1.16E-08	1.68E-06	2.53E-05	1.14E-04	-8.37E-05
EP-marine	[kg N eq.]	1.08E-02	6.52E-06	1.44E-06	1.66E-06	2.65E-05	1.57E-04	7.88E-04	-1.98E-04
EP-terrestrial	[mol N eq.]	6.61E-02	7.05E-05	1.30E-05	1.82E-05	2.89E-04	9.98E-04	2.84E-03	-1.97E-03
POCP	[kg NMVOC eq.]	2.31E-02	4.32E-05	4.30E-06	5.42E-06	1.23E-04	3.36E-04	7.35E-04	-8.60E-04
ADPm[1]	[kg Sb eq.]	5.44E-05	2.94E-08	2.90E-09	1.38E-10	8.03E-08	5.97E-07	5.74E-07	-4.42E-07
ADPf[1]	[MJ]	1.04E+02	1.58E-01	9.74E-03	5.19E-03	3.53E-01	5.00E-01	1.96E+00	-4.52E+00
WDP[1]	[m^3 world eq. deprived]	7.59E+00	9.67E-04	4.26E-04	1.52E-05	1.97E-03	1.53E-02	8.42E-02	-8.21E-02
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 4: PA6, PA66									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	3.37E-07	1.03E-09	1.32E-10	1.02E-10	1.98E-09	3.03E-08	3.61E-07	-4.58E-09
IRP[2]	[kBq U235 eq.]	1.28E-02	1.92E-04	5.59E-05	2.32E-06	4.53E-04	2.17E-03	9.98E-03	-4.11E-02
ETP-fw[1]	[CTUe]	8.14E+00	3.75E-02	1.51E-02	7.35E-04	9.49E-02	1.42E+00	1.02E+01	-6.45E-01
HTP-c[1]	[CTUh]	1.24E-09	6.74E-11	5.33E-12	1.55E-12	1.76E-10	2.69E-10	5.07E-10	-3.21E-10
HTP-nc[1]	[CTUh]	8.63E-09	1.04E-10	2.72E-11	7.04E-13	2.27E-10	2.27E-09	5.40E-09	-1.09E-09
SQP[1]	-	2.80E+00	1.59E-01	4.55E-03	3.64E-04	2.10E-01	9.62E-01	6.14E-01	-3.68E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER 1 KG – GROUP 4: PA6, PA66									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	4.52E+00	0.00E+00	5.69E-02	3.17E-05	5.99E-03	5.82E-02	1.07E-01	0.00E+00
PERM	[MJ]	2.03E-01	0.00E+00	-2.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	4.73E+00	0.00E+00	-1.46E-01	3.17E-05	5.99E-03	5.82E-02	1.07E-01	0.00E+00
PENRE	[MJ]	9.38E+01	1.58E-01	4.21E-02	5.19E-03	3.53E-01	5.00E-01	1.96E+00	0.00E+00
PENRM	[MJ]	2.45E+01	0.00E+00	-5.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	1.18E+02	1.58E-01	-1.33E-02	5.19E-03	3.53E-01	5.00E-01	1.96E+00	0.00E+00
SM	[kg]	1.73E-02	6.83E-05	5.34E-06	2.15E-06	1.62E-04	3.32E-03	7.27E-04	-7.89E-04
RSF	[MJ]	1.45E-03	8.62E-07	8.17E-08	5.63E-09	2.04E-06	2.61E-05	1.66E-05	-5.43E-04
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
FW	[m^3]	5.50E-02	2.37E-05	1.01E-05	3.71E-07	4.84E-05	3.83E-04	2.00E-03	-2.04E-03
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 KG – GROUP 4: PA6, PA66									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	7.67E-02	2.30E-04	1.50E-05	5.80E-06	5.09E-04	9.86E-03	7.90E-02	-8.47E-03
NHWD	[kg]	8.07E-01	4.60E-03	1.73E-02	7.92E-05	1.07E-02	2.18E-01	1.16E+00	-6.56E-01
RWD	[kg]	3.23E-06	4.75E-08	1.25E-08	5.70E-10	1.13E-07	5.44E-07	2.66E-06	-1.05E-05
CRU	[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
MFR	[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
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	2.12E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	7.98E-02	0.00E+00	0.00E+00	0.00E+00	4.13E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER 1 KG – GROUP 4: PA6, PA66		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0.00
Biogenic carbon centent in accompanying packagaing	[kg C]	7.80E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product Group 5: ABS, ASA, PS

ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 5: ABS, ASA, PS									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	[kg CO_2 eq.]	3.84E+00	1.05E-02	3.00E-02	3.97E-04	2.52E-02	5.78E-02	1.65E+00	-2.71E-01
GWP-fossil	[kg CO_2 eq.]	3.86E+00	1.05E-02	3.17E-03	3.97E-04	2.52E-02	5.77E-02	1.65E+00	-2.68E-01
GWP-biogenic	[kg CO_2 eq.]	-2.68E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.26E-03
GWP-luluc	[kg CO_2 eq.]	1.11E-03	3.74E-06	4.15E-07	3.45E-08	8.24E-06	1.07E-04	6.50E-05	-3.23E-04
ODP	[kg CFC 11 eq.]	1.32E-08	2.19E-10	1.35E-11	6.07E-12	5.00E-10	3.51E-10	4.14E-09	-7.84E-09
AP	[mol H^+ eq.]	1.35E-02	2.49E-05	3.50E-06	3.58E-06	7.87E-05	3.15E-04	6.76E-04	-7.94E-04
EP-freshwater	[kg P eq.]	2.74E-04	7.41E-07	1.34E-07	1.16E-08	1.68E-06	2.53E-05	1.14E-04	-9.09E-05
EP-marine	[kg N eq.]	2.45E-03	6.52E-06	1.44E-06	1.66E-06	2.65E-05	1.57E-04	7.88E-04	-2.17E-04
EP-terrestrial	[mol N eq.]	2.39E-02	7.05E-05	1.30E-05	1.82E-05	2.89E-04	9.98E-04	2.84E-03	-2.16E-03
POCP	[kg NMVOC eq.]	1.12E-02	4.32E-05	4.30E-06	5.42E-06	1.23E-04	3.36E-04	7.35E-04	-9.31E-04
ADPm[1]	[kg Sb eq.]	5.69E-06	2.94E-08	2.90E-09	1.38E-10	8.03E-08	5.97E-07	5.74E-07	-4.65E-07
ADPf[1]	[MJ]	7.76E+01	1.58E-01	9.74E-03	5.19E-03	3.53E-01	5.00E-01	1.96E+00	-4.95E+00
WDP[1]	[m^3 world eq. deprived]	1.98E+00	9.67E-04	4.26E-04	1.52E-05	1.97E-03	1.53E-02	8.42E-02	-8.84E-02
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95 \cdot 10^2$ or 195, while 1,12E-11 is the same as $1{,}12 \cdot 10^{-11}$ or 0,0000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 5: ABS, ASA, PS									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	[Disease incidence]	2.01E-07	1.03E-09	1.32E-10	1.02E-10	1.98E-09	3.03E-08	3.61E-07	-4.82E-09
IRP[2]	[kBq U235 eq.]	1.95E-02	1.92E-04	5.59E-05	2.32E-06	4.53E-04	2.17E-03	9.98E-03	-4.63E-02
ETP-fw[1]	[CTUe]	1.06E+01	3.75E-02	1.51E-02	7.35E-04	9.49E-02	1.42E+00	1.02E+01	-6.82E-01
HTP-c[1]	[CTUh]	1.67E-09	6.74E-11	5.33E-12	1.55E-12	1.76E-10	2.69E-10	5.07E-10	-3.61E-10
HTP-nc[1]	[CTUh]	8.88E-09	1.04E-10	2.72E-11	7.04E-13	2.27E-10	2.27E-09	5.40E-09	-1.18E-09
SQP[1]	-	3.64E+00	1.59E-01	4.55E-03	3.64E-04	2.10E-01	9.62E-01	6.14E-01	-3.71E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95 \cdot 10^2$ or 195, while 1,12E-11 is the same as $1{,}12 \cdot 10^{-11}$ or 0,0000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER 1 KG – GROUP 5: ABS, ASA, PS									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	4.47E+00	0.00E+00	5.69E-02	3.17E-05	5.99E-03	5.82E-02	1.07E-01	0.00E+00
PERM	[MJ]	2.03E-01	0.00E+00	-2.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	4.68E+00	0.00E+00	-1.46E-01	3.17E-05	5.99E-03	5.82E-02	1.07E-01	0.00E+00
PENRE	[MJ]	7.76E+01	1.58E-01	4.21E-02	5.19E-03	3.53E-01	5.00E-01	1.96E+00	0.00E+00
PENRM	[MJ]	2.81E+01	0.00E+00	-5.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	1.06E+02	1.58E-01	-1.33E-02	5.19E-03	3.53E-01	5.00E-01	1.96E+00	0.00E+00
SM	[kg]	1.83E-02	6.83E-05	5.34E-06	2.15E-06	1.62E-04	3.32E-03	7.27E-04	-8.41E-04
RSF	[MJ]	1.47E-03	8.62E-07	8.17E-08	5.63E-09	2.04E-06	2.61E-05	1.66E-05	-5.43E-04
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
FW	[m^3]	4.61E-02	2.37E-05	1.01E-05	3.71E-07	4.84E-05	3.83E-04	2.00E-03	-2.20E-03
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 KG – GROUP 5: ABS, ASA, PS									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	1.09E-01	2.30E-04	1.50E-05	5.80E-06	5.09E-04	9.86E-03	7.90E-02	-8.98E-03
NHWD	[kg]	1.04E+00	4.60E-03	1.73E-02	7.92E-05	1.07E-02	2.18E-01	1.16E+00	-6.91E-01
RWD	[kg]	4.99E-06	4.75E-08	1.25E-08	5.70E-10	1.13E-07	5.44E-07	2.66E-06	-1.19E-05
CRU	[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
MFR	[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
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	2.43E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	7.98E-02	0.00E+00	0.00E+00	0.00E+00	4.74E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^{-11} or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER 1 KG – GROUP 5: ABS, ASA, PS		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0.00
Biogenic carbon centent in accompanying packagaing	[kg C]	7.80E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product 6: TPU

ENVIRONMENTAL IMPACTS PER 1 KG – PRODUCT 6: TPU									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	3.56E+00	1.05E-02	3.00E-02	3.97E-04	2.52E-02	5.78E-02	1.65E+00	-2.50E-01
GWP-fossil	[kg CO_2 eq.]	3.55E+00	1.05E-02	3.17E-03	3.97E-04	2.52E-02	5.77E-02	1.65E+00	-2.47E-01
GWP-biogenic	[kg CO_2 eq.]	-2.68E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.02E-03
GWP-luluc	[kg CO_2 eq.]	4.52E-02	3.74E-06	4.15E-07	3.45E-08	8.24E-06	1.07E-04	6.50E-05	-3.02E-04
ODP	[kg CFC 11 eq.]	1.48E-07	2.19E-10	1.35E-11	6.07E-12	5.00E-10	3.51E-10	4.14E-09	-7.20E-09
AP	[mol H^+ eq.]	1.57E-02	2.49E-05	3.50E-06	3.58E-06	7.87E-05	3.15E-04	6.76E-04	-7.41E-04
EP-freshwater	[kg P eq.]	1.21E-03	7.41E-07	1.34E-07	1.16E-08	1.68E-06	2.53E-05	1.14E-04	-8.51E-05
EP-marine	[kg N eq.]	5.89E-03	6.52E-06	1.44E-06	1.66E-06	2.65E-05	1.57E-04	7.88E-04	-2.02E-04
EP-terrestrial	[mol N eq.]	3.78E-02	7.05E-05	1.30E-05	1.82E-05	2.89E-04	9.98E-04	2.84E-03	-2.01E-03
POCP	[kg NMVOC eq.]	1.55E-02	4.32E-05	4.30E-06	5.42E-06	1.23E-04	3.36E-04	7.35E-04	-8.74E-04
ADPm[1]	[kg Sb eq.]	4.45E-05	2.94E-08	2.90E-09	1.38E-10	8.03E-08	5.97E-07	5.74E-07	-4.46E-07
ADPf[1]	[MJ]	7.79E+01	1.58E-01	9.74E-03	5.19E-03	3.53E-01	5.00E-01	1.96E+00	-4.60E+00
WDP[1]	[m^3 world eq. deprived]	1.68E+00	9.67E-04	4.26E-04	1.52E-05	1.97E-03	1.53E-02	8.42E-02	-8.33E-02
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 KG – PRODUCT 6: TPU									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	1.25E-07	1.03E-09	1.32E-10	1.02E-10	1.98E-09	3.03E-08	3.61E-07	-4.63E-09
IRP[2]	[kBq U235 eq.]	4.19E-01	1.92E-04	5.59E-05	2.32E-06	4.53E-04	2.17E-03	9.98E-03	-4.21E-02
ETP-fw[1]	[CTUe]	1.64E+02	3.75E-02	1.51E-02	7.35E-04	9.49E-02	1.42E+00	1.02E+01	-6.52E-01
HTP-c[1]	[CTUh]	7.91E-09	6.74E-11	5.33E-12	1.55E-12	1.76E-10	2.69E-10	5.07E-10	-3.28E-10
HTP-nc[1]	[CTUh]	4.01E-08	1.04E-10	2.72E-11	7.04E-13	2.27E-10	2.27E-09	5.40E-09	-1.11E-09
SQP[1]	-	1.83E+01	1.59E-01	4.55E-03	3.64E-04	2.10E-01	9.62E-01	6.14E-01	-3.69E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER 1 KG – PRODUCT 6: TPU									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1.040E+01	0.000E+00	5.693E-02	3.174E-05	5.989E-03	5.825E-02	1.070E-01	-9.719E-01
PERM	[MJ]	2.033E-01	0.000E+00	-2.033E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PERT	[MJ]	1.060E+01	0.000E+00	-1.463E-01	3.174E-05	5.989E-03	5.825E-02	1.070E-01	-9.719E-01
PENRE	[MJ]	7.817E+01	1.581E-01	4.208E-02	5.189E-03	3.534E-01	4.997E-01	1.965E+00	-4.600E+00
PENRM	[MJ]	2.436E+01	0.000E+00	-5.536E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PENRT	[MJ]	1.025E+02	1.581E-01	-1.329E-02	5.189E-03	3.534E-01	4.997E-01	1.965E+00	-4.600E+00
SM	[kg]	3.603E-02	6.831E-05	5.336E-06	2.155E-06	1.617E-04	3.317E-03	7.275E-04	-7.984E-04
RSF	[MJ]	1.609E-03	8.616E-07	8.175E-08	5.633E-09	2.042E-06	2.609E-05	1.658E-05	-5.427E-04
NRSF	[MJ]	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
FW	[m^3]	4.058E-02	2.368E-05	1.014E-05	3.709E-07	4.841E-05	3.826E-04	1.995E-03	-2.071E-03
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95 \cdot 10^{2}$ or 195, while 1,12E-11 is the same as $1{,}12 \cdot 10^{-11}$ or 0,0000000000112.								

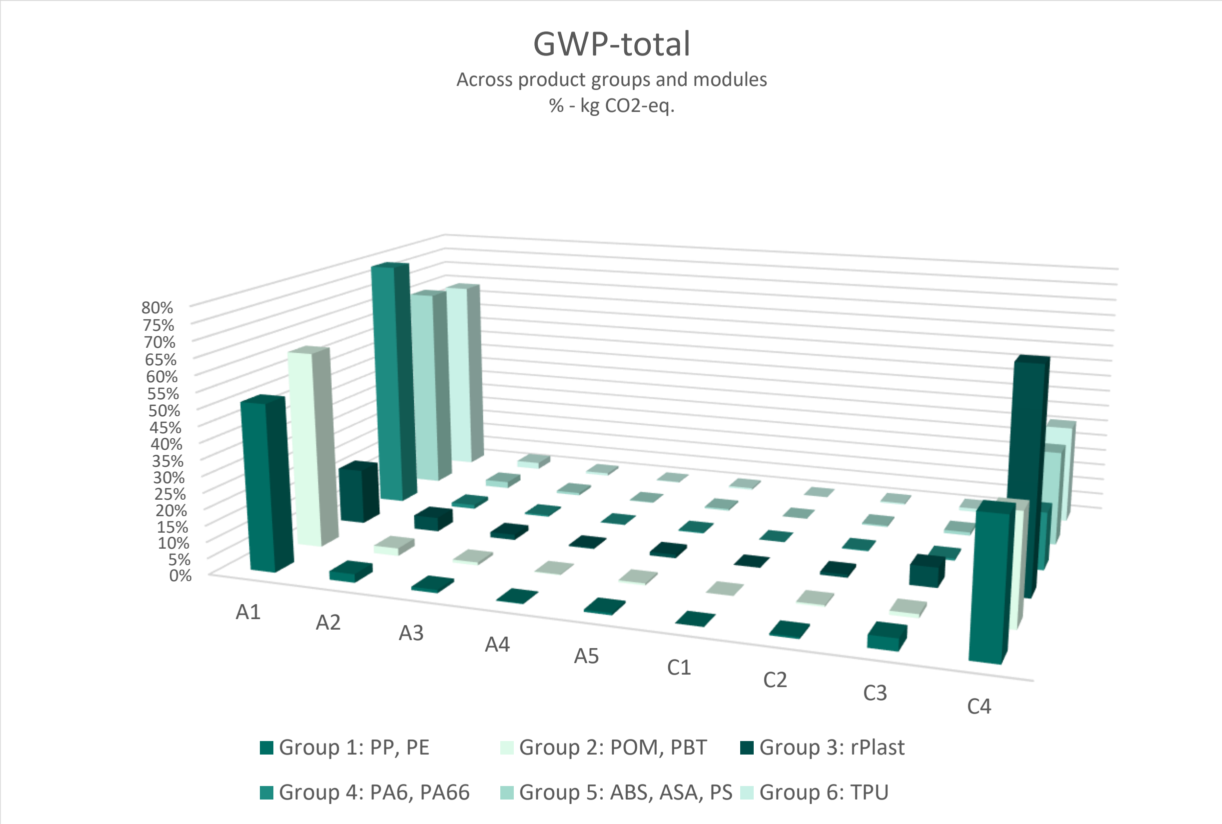
WASTE CATEGORIES AND OUTPUT FLOWS PER 1 KG – PRODUCT 6: TPU									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2.09E-01	2.30E-04	1.50E-05	5.80E-06	5.09E-04	9.86E-03	7.90E-02	-8.56E-03
NHWD	[kg]	1.11E+01	4.60E-03	1.73E-02	7.92E-05	1.07E-02	2.18E-01	1.16E+00	-6.62E-01
RWD	[kg]	1.10E-04	4.75E-08	1.25E-08	5.70E-10	1.13E-07	5.44E-07	2.66E-06	-1.08E-05
CRU	[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
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.02E-04
MER	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.24E-07
EEE	[MJ]	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	2.12E+00	-6.81E-03
EET	[MJ]	0.00E+00	0.00E+00	7.98E-02	0.00E+00	0.00E+00	0.00E+00	4.14E+00	-8.37E-04
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95 \cdot 10^{2}$ or 195, while 1,12E-11 is the same as $1{,}12 \cdot 10^{-11}$ or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER 1 KG – PRODUCT 6: TPU		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0.00
Biogenic carbon centent in accompanying packagaing	[kg C]	7.80E-03
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Additional information

LCA interpretation

The figure below provides an overview of the relative contributions each module for each product group has on the total GWP-total indicator results (A1-A5 and C1-C4).



With the exception of rPlast, module A1 is the largest contributor to the GWP-total indicator across all declared modules for the declared products, followed by C4, which represents the end-of-life incineration process. For rPlast, the contribution analysis indicates that most of the impact originates from C4 (incineration), while A1 accounts for the second-highest share.

Group 3 (rPlast) demonstrates the lowest total GWP at 2.63 kg CO_2eq, primarily due to its recycled content, which substantially reduces emissions (compared to the virgin material groups) in the raw material supply phase (A1). In contrast, Group 4 (PA6, PA66) exhibits the highest total GWP at 9.22 kg CO_2eq, with the majority of emissions stemming from the A1, indicating a high green-hous gas emissions associated with virgin polyamide production.

Groups 1 (PP, PE) and 2 (POM, PBT) show relatively moderate impacts, with totals of 4.45 and 4.92 kg CO_2eq respectively. Notably, both groups have significant contributions from the end-of-life stages (C1-C4), particularly Group 1, where these stages account for nearly half of the total impact.

Groups 5 (ABS, ASA, PS) and 6 (TPU) fall in the mid-range with GWP-totals of 5.61 and 5.33 kg CO_2eq. For both groups, the A1 phase is the dominant contributor.

The product groups, with exception of Group 6: TPU, represents a worst-case result of the materials included in the 5 groups. The worst-case results are formed following the guidelines outlined in Chapter 4.1.3 of EPD Denmark TECHNICAL RULES AND GUIDELINES Version 1.0. The following table lists which specific material represents the various environmental indicator results for the product groups. The remaining indicator results are derived from the worst-case material that represents the GWP-total for each product group as per the requirement of EPD Denmark TECHNICAL RULES AND GUIDELINES Version 1.0.

ENVIRONMENTAL IMPACTS PER 1 KG – GROUP 1: PP, PE							
Indicator	**Unit**	**Group 1: PP, PE**	**Group 2: POM, PBT**	**Group 3: rPlast**	**Group 4: PA6, PA66**	**Group 5: ABS, ASA, PS**	**Group 6: TPU**
GWP-total	kg CO_2 eq.	PE	PBT	rPE	PA6	ABS	TPU
GWP-fossil	kg CO_2 eq.	PE	PBT	rPE	PA6	ABS	TPU
GWP-biogenic	kg CO_2 eq.	PE	PBT	rPE	PA6	ABS	TPU
GWP-luluc	kg CO_2 eq.	PE	PBT	rPE	PA6	ABS	TPU
ODP	kg CFC 11 eq.	PE	PBT	rPE	PA6	ABS	TPU
AP	mol H^+ eq.	PP	PBT	rPE	PA6	ABS	TPU
EP-freshwater	kg P eq.	PP	PBT	rPE	PA66	ABS	TPU
EP-marine	kg N eq.	PP	PBT	rTPU	PA66	ABS	TPU
EP-terrestrial	mol N eq.	PP	PBT	rPE	PA6	ABS	TPU
POCP	kg NMVOC eq.	PE	PBT	rPE	PA6	ABS	TPU
ADPm[1]	kg Sb eq.	PP	PBT	rPE	PA6	ABS	TPU
ADPf[1]	MJ	PP	PBT	rPE	PA66	ABS	TPU
WDP[1]	m^3 world eq. deprived	PE	POM	rPE	PA66	ABS	TPU
PM	Disease incidence	PP	PBT	rTPU	PA6	ABS	TPU
IRP2	kBq U235 eq.	PE	POM	rPE	PA6	ABS	TPU
ETP-fw1	CTUe	PP	PBT	rTPU	PA66	ABS	TPU
HTP-c1	CTUh	PP	PBT	rPP	PA66	ABS	TPU
HTP-nc1	CTUh	PP	PBT	rPP	PA6	ABS	TPU
SQP1	-	PP	PBT	rPE	PA6	ABS	TPU

Technical information on scenarios

Transport to the building site (A4)

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	Euro 6 Truck, >32 metric ton	-
Transport distance	100	km
Capacity utilisation (including empty runs)	53.27%	%
Gross density of products transported	150	kg/m^3

End of life (C1-C4)

Scenario information	**Unit**	**Product group 1:** PP, PE	**Product group 2:** POM, PBT	**Product group 3:** rPlast	**Product group 4:** PA6, PA66	**Product group 5:** ABS, ASA, PS	**Product 6:** TPU
Collected separately	kg	1.00	1.00	1.00	1.00	1.00	1.00
Collected with mixed waste	kg	0	0	0	0	0	0
For reuse	kg	0	0	0	0	0	0
For recycling	kg	0.36	0.00	0.36	0.00	0.00	0.00
For energy recovery	kg	0.61	0.68	0.61	0.68	0.68	0.68
For final disposal	kg	0.29	0.32	0.29	0.32	0.32	0.32
Assumptions for scenario development	As appropriate	Realistic	Realistic	Realistic	Realistic	Realistic	Realistic

Re-use, recovery and recycling potential (D)

Scenario information/Material	**Product group 1:** PP, PE	**Product group 2:** POM, PBT	**Product group 3:** rPlast	**Product group 4:** PA6, PA66	**Product group 5:** ABS, ASA, PS	**Product 6:** TPU	Unit
Displaced material	1.12E-01	1.17E-02	1.17E-02	1.17E-02	1.17E-02	1.17E-02	kg
Energy recovery from waste incineration	8.51E+00	4.73E+00	8.51E+00	6.29E+00	7.21E+00	6.25E+03	MJ

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

References

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General programme instructions
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Technical Rules and Guidelines
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