ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

27917 XXX4
MULTINOVA 30 DOWN-UP
Delta Light NV

EPD HUB, EPD number HUB-4678
Published on 14.12.2025, last updated on 14.12.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.

Created with One Click LCA

DELTALIGHT

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Delta Light nv
Address	Muizelstraat 2, 8560 Wevelgem, Belgium
Contact details	sustainability@deltalight.com
Website	www.deltalight.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025 c-PCR EN 50693 for electronic and electrical products and systems
Sector	Electrical product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Iris Heus
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Magaly Gonzalez Vazquez as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. 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 and if they are not compared in a building context.

PRODUCT

Product name	MULTINOVA 30 DOWN-UP
Additional labels	-
Product reference	27917 XXX4
Place(s) of raw material origin	EU, Asia
Place of production	Delta Light N.V., Muizelstraat 2, 8560 Belgium
Place(s) of installation and use	Worldwide
Period for data	FY2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	8,35

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of luminaire
Declared unit mass	1,23 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	19,3
GWP-total, A1-A3 ($kgCO_2e$)	18,2
Secondary material, inputs (%)	44,2
Secondary material, outputs (%)	74,4
Total energy use, A1-A3 (kWh)	78,3
Net freshwater use, A1-A3 (m^3)	0,15

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Belgian and family-run since 1989, Delta Light provides premium lighting solutions for architecture. Quality products, designed for comfort and developed to last, that stand for simplicity and consistency but also show unexpected detail, from a visible screw to an ingenious touch. Because in everything Delta Light does, at project start or follow-up, we always seek to add a little extra care — and work with our partners, to guarantee we can bring their visions to completion.

PRODUCT DESCRIPTION

As a disc of light, Nova refers to the Supernova range, as both families share similarities in looks and ways of installation. Multinova has some additional features to make it multi-applicable. With 2 different diameters, a down and down-up version and a limited height of only 69mm, Multinova is perfect to fit in any residential or hospitality project, and with a prismatic sheet for reduced glare it adapts in office settings. Multinova comes in standard black or white and can also be finished in the warmer Gold Colored. To top it off – next to a sandblasted or prismatic optic – one can opt for a smoked sheet at the front. When turned on the disc is fully lit, when turned off a deep dark arises.

Specifications about the representative product: diameter of 300 mm with height of body of 69 mm. IP20 classification, class I (including power supply). Luminaire power up to 22,4W with LEDs on 2 separate LED boards (DOWN and UP). Main materials used are polycarbonate for the housing and outer ring, steel and stainless steel for the back cover and fastening materials.

This EPD is specific to the product and manufacturing facility where it is produced. Using the extrapolation coefficients in Annex 1, the results presented in this EPD can be extrapolated to the family of this product manufactured at the same factory.

Further information can be found at:
www.deltalight.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	45.5	Asia, EU
Minerals	0	-
Fossil materials	31.6	Asia, EU
Bio-based materials	0	-
Electronic parts	22.9	Asia , EU, USA

The metal components include aluminum and stainless steel. The fossil-based materials consist of polycarbonate, polyethylene and synthetic rubber. The electronic parts comprise PCBs, connectors, resistors, cables, power supplies and LEDs.

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.33

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of luminaire
Mass per declared unit	1,23 kg
Functional unit	2031 lumen during a reference lifetime of 60 000 hours
Reference service life	20,5 years when the luminaire is operated for 8 hours a day

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	x	x	ND	ND	ND	ND	ND	x	ND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = ND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The product is made of metals, plastics and electronic components. The component manufacturing happens outside of Delta Light with subcontractors (aluminum production, moulding, pcb production,...) and are then transported to Delta Light N.V. where they are assembled together. For each component, the transport distance to Delta Light is based on the supplier's country of origin. Vehicle capacity utilization volume factor is assumed to be 100%, representing a full load. This assumption is made since transportation emissions account for only a small share of total emissions. The environmental impacts considered for the product stage include the manufacturing of raw materials and components at supplier sites and the assembly to a complete luminaire at Delta Light, as well as packaging materials and other ancillary materials. Since raw materials and components are sourced from external suppliers and then assembled in Delta Light, no production losses are considered. The finished product is packed in cardboard packaging before being shipped to the installation site. Ancillary materials include tap water and rain water, with quantities determined based on factory level data. Only wastewater is considered as manufacturing waste, and its quantity is likewise determined from factory-level data. Energy sources are natural gas and electricity. Electricity is supplied to the factory through a combination of on-site photovoltaic generation and purchased grid power. A market-based approach is applied to model the purchased electricity grid mix, which is fully sourced from renewable energy. The use of green electricity is demonstrated through contractual instruments (GOs, RECs, etc), and its use is ensured throughout the validity period of this EPD.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation distance is defined according to the PCR. Average distance of transportation from production plant to building site is assumed as average 1340km, 592km, 179km for respectively boat, road and air transport. Vehicle capacity utilization volume factor is assumed to be 100% which means full load. Empty returns are not taken into account as it is assumed that return trip is used by the transportation company to serve the needs of other clients. Transportation does not cause losses as products are packaged properly. Also, volume capacity utilization factor is assumed to be 1 for the nested packaged products. Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. Environmental impacts from installation into the building (A5) include release of biogenic carbon dioxide from cardboard waste packaging, calculations are based on EUROSTAT & PSR-0014 v2 (2023): 83% of the paper/cardboard packaging is recycled, 8% of the paper/cardboard packaging is incinerated

and 9% of the paper/cardboard packaging is landfilled. The incineration results in exported electric and thermal energy. The impacts of energy consumption and the used ancillary materials during installation are considered negligible. Transportation distance to e-waste handling facility is estimated as 50 km and the transportation method is assumed to be lorry.

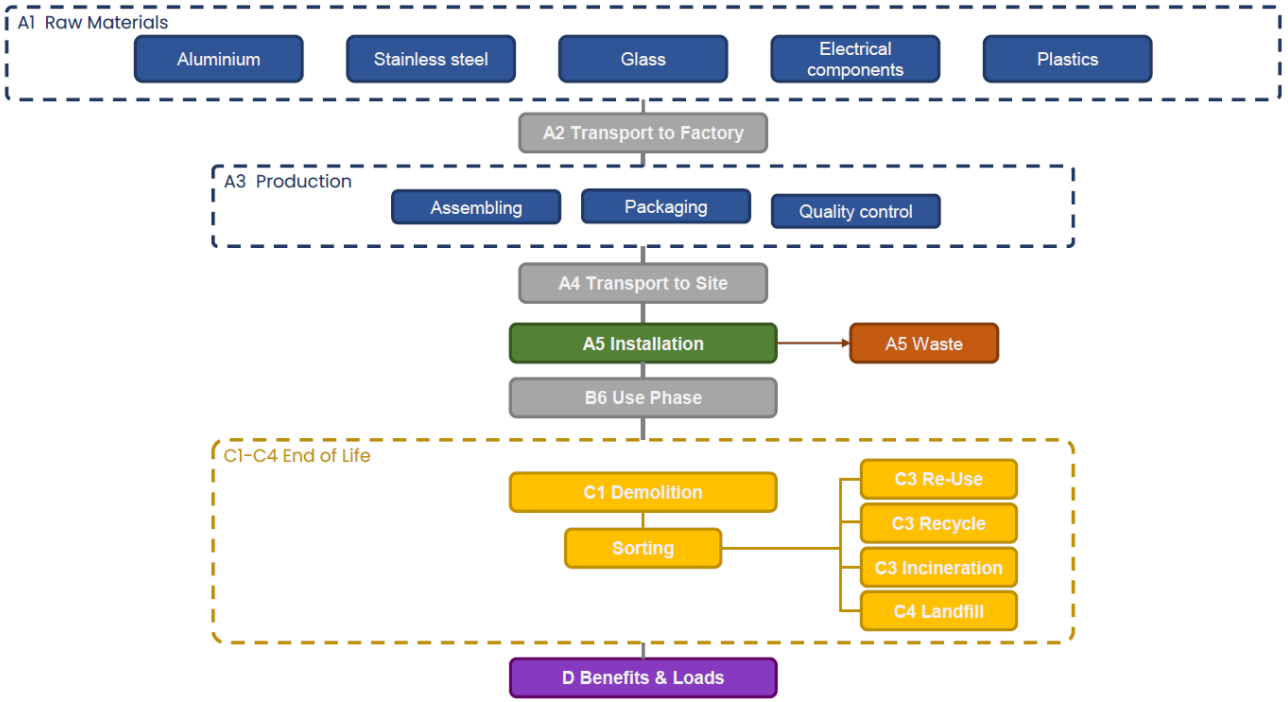
PRODUCT USE AND MAINTENANCE (B1-B7)

During the use phase, the product consumes electricity from regional (EU, North America, Asia and rest of the world) electricity grid mix (B6). Impacts due to electricity production include direct emissions to air, transformation and transmission losses. The reference service life is based on the LM80 report of the LED which is 60 000 hours. When the luminaire is operated 8 hours a day, this will result in an RSL of approximately 20.5 years. The product is assumed to undergo replacement of selected components in intervals of time (20.5 years when the luminaire is operated for 8 hours a day) based on the lifespan of parts and components. This is to ensure that the product is fully functional throughout its lifetime. This is why B1-B5 is excluded. B7 is not applicable. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy and natural resources in demolition process is assumed to be negligible. It is assumed that the waste is collected separately and transported to the waste treatment center. Transportation distance to treatment is assumed to be 50 km and the transportation method is assumed to be lorry (C2). According to EN 50693:2019, the sequence of treatment operations occurring to the product shall include de-pollution, fractions separation and preparation (dismantling, crushing, shredding, sorting), recycling, other material recovery, energy recovery and disposal. In this study, the default values from table G.4 of EN 50693 is used for treating materials in different waste treatment methods. Due to the material and energy recovery potential of parts in the lighting system, the end-of-life product is converted into recycled raw materials, while the energy recovered from incineration displaces electricity and heat production. Module D includes the environmental benefits from energy recovery (electricity and heat) from incineration of plastics at end-of-life, as well as the benefits and burdens associated with avoided production of aluminum, steel, and packaging materials. For aluminum we have 70% recovery rate and 30% disposal rate. For copper 60% disposal rate and 40% disposal rate. Other plastics 50% energy recovery rate and 50% disposal rate. For glass 60% recovery rate and 40% disposal rate. Packaging waste is not included in the End of Life stages (C3–C4). All impacts related to packaging disposal are instead accounted for in stage A5 (installation).

MANUFACTURING PROCESS



All estimations and assumptions regarding the cut off criteria and the allocation are declared in the part “Cut-off Criteria except the estimations/assumptions below:

- Module A2, A4 & C2: Vehicle capacity utilization volume factor is assumed to be 1 which means full load. It may vary but as the role of transportation emission in total results is small, the variety in load is assumed to be negligible. Empty returns are not considered as it is assumed that return trip is used by transportation companies to serve the needs of other clients.
- Module A4: Transportation does not cause losses as products are packaged properly. Also, volume capacity utilization factor is assumed to be 1 for the nested packaged products. Additionally, transportation distances are based on a sales volume-based weighted average and a lorry is the assumed vehicle type used.
- Module B4 & B6: The product is assumed to undergo replacement of selected components in intervals of time (20.5 years when the luminaire is operated for 8 hours a day) based on the lifespan of parts and components. This is to ensure that the product is fully functional throughout its lifetime.
- Module C2: Transportation distance to e-waste handling facility is estimated as 50 km and the transportation method is assumed as lorry.
- Module C3, C4, D: The product undergoes dismantling, and the parts are sorted into metals, plastics, paint and electronics. The waste treatment percentages based on EN 50693 are assumed to be applicable. Module C3 accounts for energy and resource inputs for sorting and treating these waste streams for recycling and incineration with energy recovery. Ash from recycling processes is negligible. The recycled end-of-life materials are assumed to serve as secondary raw materials in manufacturing, while incinerated materials displace the need for electricity and heat production.

LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	Not applicable
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	-

No grouping. This EPD is specific to the product and manufacturing facility where it is produced. Using the extrapolation coefficients in Annex 1, the results presented in this EPD can be extrapolated to the full family of this product manufactured at the same factory.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

Next to the standards already quoted, no other sources were used in the modelling of this EPD.

ENVIRONMENTAL IMPACT DATA

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

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	1,69E+01	3,68E-01	9,76E-01	1,82E+01	4,66E-01	1,25E+00	ND	ND	ND	ND	ND	5,88E+02	ND	0,00E+00	6,61E-03	5,08E-01	1,91E-02	-1,59E+00
GWP – fossil	kg CO_2e	1,68E+01	3,68E-01	2,16E+00	1,93E+01	4,66E-01	3,04E-02	ND	ND	ND	ND	ND	5,85E+02	ND	0,00E+00	6,60E-03	5,07E-01	1,91E-02	-4,36E-01
GWP – biogenic	kg CO_2e	6,60E-02	4,67E-05	-1,22E+00	-1,15E+00	5,51E-05	1,22E+00	ND	ND	ND	ND	ND	9,33E-01	ND	0,00E+00	1,50E-06	4,26E-04	-1,29E-05	-1,16E+00
GWP – LULUC	kg CO_2e	2,85E-02	1,62E-04	2,75E-02	5,62E-02	8,67E-05	1,67E-05	ND	ND	ND	ND	ND	1,40E+00	ND	0,00E+00	2,95E-06	3,77E-05	2,07E-06	5,19E-03
Ozone depletion pot.	kg CFC-$_{11}$e	4,43E-07	5,67E-09	4,93E-08	4,98E-07	7,84E-09	3,07E-10	ND	ND	ND	ND	ND	7,18E-06	ND	0,00E+00	9,75E-11	6,96E-10	7,89E-11	3,12E-09
Acidification potential	mol H^+e	1,33E-01	7,83E-03	6,44E-03	1,47E-01	2,43E-03	1,23E-04	ND	ND	ND	ND	ND	3,17E+00	ND	0,00E+00	2,25E-05	4,42E-04	2,21E-05	-3,86E-03
EP-freshwater[2)]	kg Pe	1,38E-02	1,27E-05	5,62E-04	1,43E-02	1,41E-05	6,78E-06	ND	ND	ND	ND	ND	4,02E-01	ND	0,00E+00	5,14E-07	9,94E-06	3,20E-07	-6,94E-04
EP-marine	kg Ne	2,02E-02	2,00E-03	2,98E-03	2,52E-02	8,09E-04	1,98E-04	ND	ND	ND	ND	ND	5,48E-01	ND	0,00E+00	7,40E-06	1,89E-04	4,02E-04	-1,17E-03
EP-terrestrial	mol Ne	2,17E-01	2,22E-02	1,80E-02	2,57E-01	8,86E-03	3,88E-04	ND	ND	ND	ND	ND	5,24E+00	ND	0,00E+00	8,05E-05	1,92E-03	8,90E-05	-1,17E-02
POCP ("smog")[3)]	kg NMVOCe	8,14E-02	6,19E-03	6,93E-03	9,45E-02	2,98E-03	1,49E-04	ND	ND	ND	ND	ND	1,63E+00	ND	0,00E+00	3,32E-05	5,48E-04	3,45E-05	-3,50E-03
ADP-minerals & metals[4)]	kg Sbe	2,60E-03	4,18E-07	8,08E-06	2,61E-03	4,56E-07	1,97E-07	ND	ND	ND	ND	ND	5,78E-03	ND	0,00E+00	1,84E-08	2,45E-07	6,42E-09	7,68E-07
ADP-fossil resources	MJ	2,29E+02	4,69E+00	3,18E+01	2,65E+02	6,37E+00	2,78E-01	ND	ND	ND	ND	ND	1,08E+04	ND	0,00E+00	9,58E-02	6,53E-01	6,79E-02	-9,57E-01
Water use[5)]	m^3e depr.	5,70E+00	1,40E-02	4,68E-01	6,18E+00	1,64E-02	7,60E-03	ND	ND	ND	ND	ND	2,66E+02	ND	0,00E+00	4,73E-04	3,48E-02	3,52E-04	4,38E-01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1,04E-06	1,38E-08	1,05E-07	1,16E-06	1,61E-08	1,65E-09	ND	ND	ND	ND	ND	1,99E-05	ND	0,00E+00	6,61E-10	8,41E-09	4,80E-10	-3,75E-08
Ionizing radiation[6]	kBq U235e	1,45E+00	2,62E-03	6,77E-02	1,52E+00	3,64E-03	1,82E-03	ND	ND	ND	ND	ND	2,46E+02	ND	0,00E+00	8,35E-05	2,38E-03	6,76E-05	1,55E-01
Ecotoxicity (freshwater)	CTUe	3,38E+02	3,62E-01	7,21E+00	3,46E+02	4,38E-01	9,92E-01	ND	ND	ND	ND	ND	1,86E+03	ND	0,00E+00	1,36E-02	9,62E-01	1,56E+00	-1,45E+00
Human toxicity, cancer	CTUh	1,62E-08	6,66E-11	7,71E-10	1,71E-08	4,63E-11	2,20E-11	ND	ND	ND	ND	ND	1,51E-07	ND	0,00E+00	1,09E-12	4,74E-11	2,36E-12	-5,51E-11
Human tox. non-cancer	CTUh	7,56E-07	1,89E-09	1,97E-08	7,78E-07	4,47E-09	1,17E-09	ND	ND	ND	ND	ND	8,02E-06	ND	0,00E+00	6,20E-11	1,91E-09	4,55E-10	5,76E-10
SQP[7]	-	7,80E+01	1,14E+00	6,26E+01	1,42E+02	2,21E+00	2,05E-01	ND	ND	ND	ND	ND	2,28E+03	ND	0,00E+00	9,65E-02	1,32E-01	1,49E-01	-8,76E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8]	MJ	2,37E+01	4,01E-02	3,97E+00	2,77E+01	4,90E-02	-1,21E+01	ND	ND	ND	ND	ND	2,50E+03	ND	0,00E+00	1,31E-03	3,63E-02	1,04E-03	-1,49E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	1,07E+01	1,07E+01	0,00E+00	-1,07E+01	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,59E+00
Total use of renew. PER	MJ	2,37E+01	4,01E-02	1,47E+01	3,84E+01	4,90E-02	-2,29E+01	ND	ND	ND	ND	ND	2,50E+03	ND	0,00E+00	1,31E-03	3,63E-02	1,04E-03	-5,35E+00
Non-re. PER as energy	MJ	2,17E+02	4,70E+00	3,19E+01	2,54E+02	6,37E+00	2,78E-01	ND	ND	ND	ND	ND	1,08E+04	ND	0,00E+00	9,58E-02	-6,37E+00	-7,02E+00	-1,14E+00
Non-re. PER as material	MJ	1,12E+01	0,00E+00	8,71E-02	1,12E+01	0,00E+00	-8,71E-02	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	-5,58E+00	-5,58E+00	2,32E-01
Total use of non-re. PER	MJ	2,29E+02	4,70E+00	3,20E+01	2,65E+02	6,37E+00	1,91E-01	ND	ND	ND	ND	ND	1,08E+04	ND	0,00E+00	9,58E-02	-1,19E+01	-1,26E+01	-9,10E-01
Secondary materials	kg	5,45E-01	1,90E-03	6,37E-01	1,18E+00	1,35E-03	4,58E-04	ND	ND	ND	ND	ND	1,72E+00	ND	0,00E+00	4,08E-05	2,96E-04	2,27E-05	5,27E-01
Renew. secondary fuels	MJ	7,03E-03	8,13E-06	9,23E-02	9,93E-02	1,26E-05	2,59E-06	ND	ND	ND	ND	ND	1,26E-02	ND	0,00E+00	5,18E-07	1,16E-05	4,29E-07	-1,83E-05
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,35E-01	3,69E-04	1,05E-02	1,46E-01	4,94E-04	-1,57E-04	ND	ND	ND	ND	ND	8,10E+00	ND	0,00E+00	1,42E-05	6,47E-04	-7,22E-04	1,20E-02

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,36E+00	5,61E-03	7,94E-02	2,44E+00	4,85E-03	4,68E-03	ND	ND	ND	ND	ND	4,46E+01	ND	0,00E+00	1,62E-04	9,82E-03	1,23E-04	-7,21E-02
Non-hazardous waste	kg	7,14E+01	8,59E-02	7,15E+00	7,86E+01	9,54E-02	5,32E-01	ND	ND	ND	ND	ND	1,96E+03	ND	0,00E+00	3,00E-03	2,58E-01	9,96E-01	-9,63E-01
Radioactive waste	kg	3,57E-04	6,41E-07	1,60E-05	3,74E-04	8,95E-07	4,64E-07	ND	ND	ND	ND	ND	6,24E-02	ND	0,00E+00	2,04E-08	5,83E-07	1,65E-08	4,03E-05

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,00E-01	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	7,25E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	1,93E-01	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,60E-01	ND	ND	ND	ND	ND	0,00E+00	ND	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	1,50E-01	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy –	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,10E-01	ND	ND	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1,68E+01	3,66E-01	2,28E+00	1,94E+01	4,63E-01	1,16E-01	ND	ND	ND	ND	ND	5,84E+02	ND	0,00E+00	6,57E-03	5,07E-01	1,83E-02	-4,29E-01
Ozone depletion Pot.	kg CFC_{-11}e	4,50E-07	4,50E-09	4,68E-08	5,01E-07	6,22E-09	2,51E-10	ND	ND	ND	ND	ND	6,06E-06	ND	0,00E+00	7,78E-11	5,75E-10	6,30E-11	2,39E-09
Acidification	kg SO_2e	1,11E-01	6,23E-03	4,47E-03	1,22E-01	1,85E-03	9,38E-05	ND	ND	ND	ND	ND	2,67E+00	ND	0,00E+00	1,72E-05	3,23E-04	1,63E-05	-2,94E-03
Eutrophication	kg PO_4^3e	3,79E-02	7,20E-04	3,03E-03	4,17E-02	3,22E-04	1,41E-04	ND	ND	ND	ND	ND	3,33E-01	ND	0,00E+00	4,19E-06	7,66E-05	2,18E-05	-2,48E-04
POCP (“smog”)	kg C_2H_4e	1,23E-02	3,20E-04	5,14E-04	1,31E-02	1,29E-04	2,78E-05	ND	ND	ND	ND	ND	1,47E-01	ND	0,00E+00	1,53E-06	2,21E-05	3,91E-06	-2,64E-04
ADP-elements	kg Sbe	2,60E-03	4,11E-07	7,95E-06	2,60E-03	4,45E-07	1,93E-07	ND	ND	ND	ND	ND	5,77E-03	ND	0,00E+00	1,80E-08	2,34E-07	6,24E-09	7,19E-07
ADP-fossil	MJ	2,06E+02	4,65E+00	3,07E+01	2,41E+02	6,31E+00	2,46E-01	ND	ND	ND	ND	ND	6,59E+03	ND	0,00E+00	9,45E-02	6,15E-01	6,69E-02	-3,76E+00

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	1,68E+01	3,68E-01	2,19E+00	1,94E+01	4,66E-01	3,05E-02	ND	ND	ND	ND	ND	5,87E+02	ND	0,00E+00	6,61E-03	5,07E-01	1,91E-02	-4,31E-01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH4 fossil, CH4 biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO2 is set to zero.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation – A3

Scenario parameter	Value
Electricity data source and quality	Electricity, medium voltage, residual mix (Reference product: electricity, medium voltage)
Electricity kg CO2e / kWh	0.13
Renewable energy data source and quality	Electricity production, on-site photovoltaic generation
Electricity kg CO2e / kWh	0.092
District heating data source and quality	District heat, Wevelgem, Belgium, 2024
District heating kg CO2e / MJ	0.075

Transport to installation site scenario documentation - A4

Scenario parameter	Value
List of fuel and vehicle types with corresponding average transport distance in km	Lorry >32 metric ton, EURO5: 592 Container ship: 1340 Aircraft: 179
Capacity utilization (including empty return) %	100
Bulk density of transported products / kg/m3	-
Volume capacity utilization factor (factor: =1 or <1 or ≥1 for compressed or nested packaged products)	1

Installation scenario documentation - A5 (Energy and waste materials)

Scenario parameter	Value
Ancillary materials for installation	Not applicable
Water use (kg)	5,17
Direct emissions to ambient air, soil and water (kg)	Not applicable
Corrugated board box production (kg)	0,84
Packaging End-of-life	83% recycling 9% sanitary landfill 8% incineration: 0.21 MJ thermal + 0.15 MJ electrical energy

Use stages scenario documentation - B2 Maintenance

Scenario information	Value
Maintenance process / Description or source where description can be found	-
Maintenance cycle / Number per RSL or year (Not applicable if only B2 is declared)	-

Use stages scenario documentation - B3 Repair

Scenario information	Value
Repair process / Description or source where description can be found	-
Inspection Process / Description or source where description can be found	-
Repair cycle / Number per RSL or year	-

Use stages scenario documentation - B4 Replacement

Scenario information	Value
Replacement cycle / Number per RSL or year	0

Use stages scenario documentation - B5 Refurbishment

Scenario information	Value
Refurbishment process / Description or source where description can be found	-
Refurbishment cycle / Number per RSL or year	-
Further assumptions for scenario development, e.g., frequency and time period of use, number of occupants / Units as appropriate	-

Use stages scenario documentation - B6 Use of energy and water

Scenario information	Value

Ancillary materials	Not applicable
Net fresh water consumption	Not applicable
Power consumption in W	22,4
Sales-weighted distribution of low voltage regional electricity grid mix consumption	Region: EU, Percentage: 71 %, Electricity consumption (kWh): 954,24 Region: Asia, Percentage: 7,1 %, Electricity consumption (kWh): 95,42 Region: NA, Percentage: 10 %, Electricity consumption (kWh): 134,4 Region: Rest of world, Percentage: 11,9 %, Electricity consumption (kWh): 159,94
Period of use	20,5 years when the luminaire operates 8 hours a day
Performance	Emits 2031 lumen during a reference lifetime of 60000 hours

Use stages scenario documentation - B7

N/A

End-of-life scenario documentation - C1-C4

Scenario information	Value
Materials for recycling (mass in kg is displayed)	Electric and electronic equipment: 0.28 Aluminium: 0.012 Steel: 0.43
Sanitary landfill (mass in kg is displayed)	Polyethylene: 0.005 Plastic, mixture: 0.19 Steel: 0.11 Aluminium: 0.0051
Materials for energy recovery (mass in kg is displayed)	Polyethylene: 0.005 Plastic, mixture: 0.19
Exported energy (MJ)	Thermal: 3.75 Electricity: 0.67
Transportation	Lorry, >32 metric ton, EURO5; 50 km

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15802+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

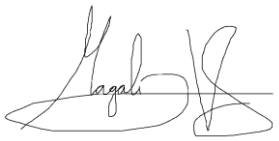
The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

Magaly Gonzalez Vazquez as an authorized verifier for EPD Hub Limited
14.12.2025



VERIFIED ISO 14025

ANNEX 1 - PEP EXTRAPOLATION COEFFICIENTS MULTINOVA + SUPERNOVA RANGE

Extrapolation rules have been calculated according to PSR-0014-ed2.0-EN-2023 07 13. The extrapolation coefficients are calculated at product level, with respect to the reference product 27917 XXX4.

The extrapolation coefficients were calculated in the following way:

- **Fabrication stage (A1-A3) extrapolation coefficient:**
  Maximum value out of formulas described in 3.6.3 Extrapolation rules applied to fabrication stage (A1-A3)
- **Distribution stage (A4) extrapolation coefficient:**
  Value out of formula described in 3.6.4 Extrapolation rules applied to distribution stage (A4)
- **Installation stage (A5) extrapolation coefficient:**
  Value out of formula described in 3.6.5 Extrapolation rules applied to installation stage (A5)
- **Use stage (B1 – B7) extrapolation coefficient:**
  Maximum value out of formulas described in 3.6.6. Extrapolation rules applied to use stage (B1 to B7) (B2 is not declared in our case, so the formula of B6 applies)
- **End of life stage (C1 to C4) extrapolation coefficient:**
  Value out of formula described in 3.6.7. Extrapolation rules applied to end-of-life stage (C1 to C4)
- **Benefits (D) extrapolation coefficient:**
  Maximum value out of formulas described in 3.6.8. Extrapolation rules applied to net benefits beyond the system boundaries stage (D) (optional)

The extrapolation at the level of the functional unit can be done according to the following formula:

$$Extrapolation\ coefficient\ at\ the\ product\ level\ x\ \left(\frac{Lighting\ output\ of\ reference\ product\ (lumen)}{Lighting\ output\ of\ product\ concerned\ (lumen)}\right)$$

Data used in the calculation of extrapolation coefficients

Mass code	Description	product weight (kg)	packaging weight (kg)	Total weight (kg)	Control gear weight (kg)	Class	IP	Luminaire lumen (lm)	Luminaire power (W)
27911 XXX0	MULTINOVA 30	1,49	0,603	2,093	0,1180	I	IP20	1580	17
27911 XXX4	MULTINOVA 30 DIM4	1,547	0,649	2,196	0,149	I	IP20	1580	17
27912 XXX0	MULTINOVA 30 PRISM	1,8	0,36	2,16	0,118	I	IP20	1394	17
27912 XXX4	MULTINOVA 30 PRISM DIM4	1,8	0,36	2,16	0,149	I	IP20	1394	17
27914 XXX5	MULTINOVA 30 TW DIM5	1,8	0,36	2,16	0,16	I	IP20	993	11
27915 XXX5	MULTINOVA 30 TW PRISM DIM5	1,8	0,36	2,16	0,16	I	IP20	883	11
27916 XXX5	MULTINOVA 30 SOFT DIM5	1,8	0,36	2,16	0,1490	I	IP20	1590	17
27917 XXX0	MULTINOVA 30 DOWN-UP	1,604	0,654	2,258	0,1180	I	IP20	2031	22
27917 XXX4 (ref)	MULTINOVA 30 DOWN-UP DIM4	1,2323275	0,84083625	2,07316375	0,1490	I	IP20	2031	22
27918 XXX0	MULTINOVA 30 DOWN-UP PRISM	1,9	0,38	2,28	0,118	I	IP20	1912	22
27918 XXX4	MULTINOVA 30 DOWN-UP PRISM DIM4	1,9	0,38	2,28	0,149	I	IP20	1912	22
27920 XXX5	MULTINOVA 30 DOWN-UP TW DIM5	1,9	0,38	2,28	0,16	I	IP20	1294	13
27921 XXX5	MULTINOVA 30 DOWN-UP TW PRISM DIM5	1,9	0,38	2,28	0,16	I	IP20	1191	13
28011 XXX0	MULTINOVA 55	4,084	0,854	4,938	0,144	I	IP20	3842	40
28011 XXX4	MULTINOVA 55 DIM4	4,084	0,854	4,938	0,158	I	IP20	3842	40
28012 XXX0	MULTINOVA 55 PRISM	4,5	0,9	5,4	0,144	I	IP20	3466	40
28012 XXX4	MULTINOVA 55 PRISM DIM4	4,5	0,9	5,4	0,1580	I	IP20	3466	40
28014 XXX5	MULTINOVA 55 TW DIM5	4,5	0,9	5,4	0,168	I	IP20	3570	36
28015 XXX5	MULTINOVA 55 TW PRISM DIM5	4,5	0,9	5,4	0,1680	I	IP20	3221	36
28016 XXX5	MULTINOVA 55 SOFT DIM5	4,5	0,9	5,4	0,158	I	IP20	3681	37
28017 XXX0	MULTINOVA 55 DOWN-UP	4,6	0,92	5,52	0,144	I	IP20	4510	46
28017 XXX4	MULTINOVA 55 DOWN-UP DIM4	4,6	0,92	5,52	0,158	I	IP20	4510	46
28018 XXX0	MULTINOVA 55 DOWN-UP PRISM	4,6	0,92	5,52	0,144	I	IP20	4134	46
28018 XXX4	MULTINOVA 55 DOWN-UP PRISM DIM4	4,6	0,92	5,52	0,158	I	IP20	4134	46
28020 XXX5	MULTINOVA 55 DOWN-UP TW DIM5	4,6	0,92	5,52	0,168	I	IP20	3966	38
28021 XXX5	MULTINOVA 55 DOWN-UP TW PRISM DIM5	4,6	0,92	5,52	0,168	I	IP20	3635	38
20616 XXX0	SUPERNOVA LINE 65 DOWN-UP	6,4	1,28	7,68	0,407	I	IP20	8053	85

20616 XXX1	SUPERNOVA LINE 65 DOWN-UP DIM1	7,1	1,42	8,52	0,59	I	IP20	8053	85
20616 XXX5	SUPERNOVA LINE 65 DOWN-UP DIM5	7,1	1,42	8,52	0,446	I	IP20	8053	85
20618 XXX0	SUPERNOVA LINE 95 DOWN-UP	13	2,6	15,6	0,975	I	IP20	19661	203
20618 XXX1	SUPERNOVA LINE 95 DOWN-UP DIM1	13	2,6	15,6	0,99	I	IP20	19661	203
20618 XXX5	SUPERNOVA LINE 95 DOWN-UP DIM5	13	2,6	15,6	0,712	I	IP20	19648	203
20620 XXX0	SUPERNOVA LINE 125 DOWN-UP	21	4,2	25,2	1,017	I	IP20	32522	322
20620 XXX1	SUPERNOVA LINE 125 DOWN-UP DIM1	21	4,2	25,2	1,835	I	IP20	32522	322
20620 XXX5	SUPERNOVA LINE 125 DOWN-UP DIM5	21	4,2	25,2	1,33	I	IP20	32522	322
20622 XXX0	SUPERNOVA LINE 65	6,3	1,26	7,56	0,238	I	IP20	6165	68
20622 XXX1	SUPERNOVA LINE 65 DIM1	6,3	1,26	7,56	0,295	I	IP20	6165	68
20622 XXX5	SUPERNOVA LINE 65 DIM5	6,3	1,26	7,56	0,266	I	IP20	6165	68
20624 XXX0	SUPERNOVA LINE 95	12,3	2,46	14,76	0,629	I	IP20	15871	169
20624 XXX1	SUPERNOVA LINE 95 DIM1	12,1	2,42	14,52	0,77	I	IP20	15871	169
20624 XXX5	SUPERNOVA LINE 95 DIM5	12,1	2,42	14,52	0,532	I	IP20	15871	169
20626 XXX0	SUPERNOVA LINE 125	19,6	3,92	23,52	0,8	I	IP20	26527	271
20626 XXX1	SUPERNOVA LINE 125 DIM1	19,6	3,92	23,52	1,54	I	IP20	26527	271
20626 XXX5	SUPERNOVA LINE 125 DIM5	19,6	3,92	23,52	1,064	I	IP20	26527	271
274 95 06 26 ED5	SUPERNOVA LINE 65 TW DIM5	6,365	1,957	8,322	0,275	I	IP20	3131	52
274 95 06 26 WD	SUPERNOVA LINE 65 TW WD	6,03	2,22	8,25	0,275	I	IP20	3131	52
274 95 09 26 ED5	SUPERNOVA LINE 95 TW DIM5	11,8	3,4	15,2	0,825	I	IP20	8016	129
274 95 09 26 WD	SUPERNOVA LINE 95 TW WD	12,8	3,1	15,9	0,825	I	IP20	8016	129
274 95 12 26 ED5	SUPERNOVA LINE 125 TW DIM5	19,8	4,4	24,2	1,1	I	IP20	13469	206
274 95 12 26 WD	SUPERNOVA LINE 125 TW WD	16,6	6,64	23,24	1,1	I	IP20	13469	206
274 96 06 26 ED5	SUPERNOVA LINE 65 TW DOWN-UP DIM5	7,1	2	9,1	0,55	I	IP20	4332	72
274 96 09 26 ED5	SUPERNOVA LINE 95 TW DOWN-UP DIM5	14	3	17	1,1	I	IP20	10418	167
274 96 12 26 ED5	SUPERNOVA LINE 125 TW DOWN-UP DIM5	20,8	4,9	25,7	1,375	I	IP20	17072	263

Applicable extrapolation coefficients for Multinova mass codes similar to the reference

		A1-A3	A4	A5	B6	C1-C4	D
Mass code	Extrapol. FU	MAXIMUM A1-A3	Distribution stage	Installation stage	Use stage	EOL stage	MAXIMUM D
27911 XXX0	1,285	1,209	1,010	0,717	1,545	1,010	1,209
27911 XXX4	1,285	1,255	1,059	0,772	0,773	1,059	1,255
27912 XXX0	1,457	1,461	1,042	0,428	1,545	1,042	1,461
27912 XXX4	1,457	1,461	1,042	0,428	0,773	1,042	1,461
27914 XXX5	2,045	1,461	1,042	0,428	0,500	1,042	1,461
27915 XXX5	2,300	1,461	1,042	0,428	0,500	1,042	1,461
27916 XXX5	1,277	1,461	1,042	0,428	0,773	1,042	1,461
27917 XXX0	1,000	1,302	1,089	0,778	2,000	1,089	1,302
27917 XXX4 (ref)	1,000	1,000	1,000	1,000	1,000	1,000	1,000
27918 XXX0	1,062	1,542	1,100	0,452	2,000	1,100	1,542
27918 XXX4	1,062	1,542	1,100	0,452	1,000	1,100	1,542
27920 XXX5	1,570	1,542	1,100	0,452	0,591	1,100	1,542
27921 XXX5	1,705	1,542	1,100	0,452	0,591	1,100	1,542
28011 XXX0	0,529	3,314	2,382	1,016	3,636	2,382	3,314
28011 XXX4	0,529	3,314	2,382	1,016	1,818	2,382	3,314
28012 XXX0	0,586	3,652	2,605	1,070	3,636	2,605	3,652
28012 XXX4	0,586	3,652	2,605	1,070	1,818	2,605	3,652
28014 XXX5	0,569	3,652	2,605	1,070	1,636	2,605	3,652
28015 XXX5	0,631	3,652	2,605	1,070	1,636	2,605	3,652
28016 XXX5	0,552	3,652	2,605	1,070	1,682	2,605	3,652
28017 XXX0	0,450	3,733	2,663	1,094	4,182	2,663	3,733
28017 XXX4	0,450	3,733	2,663	1,094	2,091	2,663	3,733
28018 XXX0	0,491	3,733	2,663	1,094	4,182	2,663	3,733
28018 XXX4	0,491	3,733	2,663	1,094	2,091	2,663	3,733
28020 XXX5	0,512	3,733	2,663	1,094	1,727	2,663	3,733

28021 XXX5	0,559	3,733	2,663	1,094	1,727	2,663	3,733
20616 XXX0	0,252	5,193	3,704	1,522	7,727	3,704	5,193
20616 XXX1	0,252	5,761	4,110	1,689	3,864	4,110	5,761
20616 XXX5	0,252	5,761	4,110	1,689	3,864	4,110	5,761
20618 XXX0	0,103	10,549	7,525	3,092	18,455	7,525	10,549
20618 XXX1	0,103	10,549	7,525	3,092	9,227	7,525	10,549
20618 XXX5	0,103	10,549	7,525	3,092	9,227	7,525	10,549
20620 XXX0	0,062	17,041	12,155	4,995	29,273	12,155	17,041
20620 XXX1	0,062	17,041	12,155	4,995	14,636	12,155	17,041
20620 XXX5	0,062	17,041	12,155	4,995	14,636	12,155	17,041
20622 XXX0	0,329	5,112	3,647	1,499	6,182	3,647	5,112
20622 XXX1	0,329	5,112	3,647	1,499	3,091	3,647	5,112
20622 XXX5	0,329	5,112	3,647	1,499	3,091	3,647	5,112
20624 XXX0	0,128	9,981	7,120	2,926	15,364	7,120	9,981
20624 XXX1	0,128	9,819	7,004	2,878	7,682	7,004	9,819
20624 XXX5	0,128	9,819	7,004	2,878	7,682	7,004	9,819
20626 XXX0	0,077	15,905	11,345	4,662	24,636	11,345	15,905
20626 XXX1	0,077	15,905	11,345	4,662	12,318	11,345	15,905
20626 XXX5	0,077	15,905	11,345	4,662	12,318	11,345	15,905
274 95 06 26 ED5	0,649	5,165	4,014	2,327	2,364	4,014	5,165
274 95 06 26 WD	0,649	4,893	3,979	2,640	2,364	3,979	4,893
274 95 09 26 ED5	0,253	9,575	7,332	4,044	5,864	7,332	9,575
274 95 09 26 WD	0,253	10,387	7,669	3,687	5,864	7,669	10,387
274 95 12 26 ED5	0,151	16,067	11,673	5,233	9,364	11,673	16,067
274 95 12 26 WD	0,151	13,470	11,210	7,897	9,364	11,210	13,470
274 96 06 26 ED5	0,469	5,761	4,389	2,379	3,273	4,389	5,761
274 96 09 26 ED5	0,195	11,361	8,200	3,568	7,591	8,200	11,361
274 96 12 26 ED5	0,119	16,879	12,397	5,828	11,955	12,397	16,879