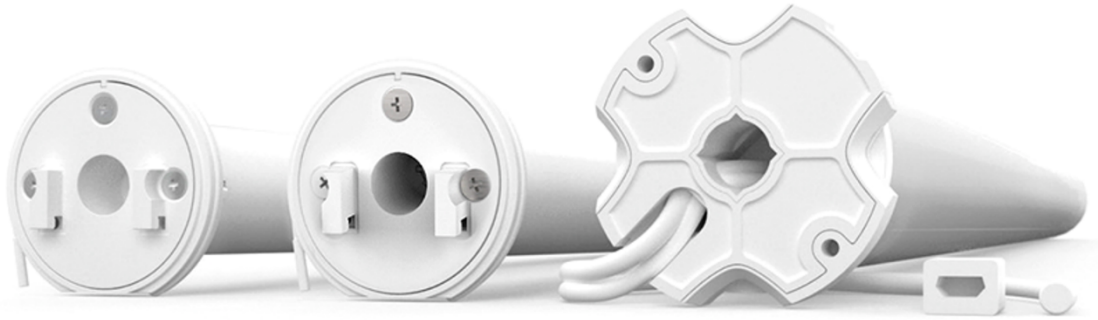
Environmental Product Declaration

In accordance with ISO 14025:2006 and ISO 21930:2017



Environmental Product Declaration for Automate AC/DC Motors by Rollease Acmeda

ADMINISTRATIVE INFORMATION

International Certified Environmental Product Declaration

Declared Product	This Environmental Product Declaration (EPD) covers Automate AC/DC motors by Rollease Acmeda
Functional Unit	A motor that can deliver a mechanical power output of 10 W for the purpose of moving an object over its 10-year service life.
Declaration Owner	Rollease Acmeda
	750 East Main Street
	Stamford, CT
	www.rolleaseacmeda.com
Program Operator	Labeling Sustainability
	200 S.Rosemary
	West Palm Beach, FL
	https://www.labelingsustainability.com/
Product Category Rule	ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services
	PCR Program Operator: International Organization for Standardization
	PCR review was conducted by: Technical Committee: ISO/TC 59/SC 17 Sustainability in buildings and civil engineering works
ISO Standards	ISO 14044:2006 Environmental Management - Life Cycle Assessment - Requirements and Guidelines
	ISO 14040:2006 Environmental Management - Life Cycle Assessment - Principles and Framework
Market of Applicability	North America
EPD Scope	Cradle to Grave
EPD Type	Manufacturer-Specific EPD
LCIA Method and Version	TRACI 2.1, IPCC 2013 (AR5) CML-IA v4.8 (2016)
Independent LCA Reviewer and EPD Verifier:	This declaration was independently verified in accordance with ISO 14025:2006
	Independent verification of the declaration, according to ISO 14025:2006
	External: X
	Third Party Verifier
	Hammad Ur Rehman
Date of Issue:	12-12-2025
Period of Validity:	12-12-2030
EPD Number:	RAMMOT2025121201

Environmental declarations from different programs (Iso 14025) may not be comparable. EPDs are comparable only if prepared from cradle-to-grave life cycle results and based on the same function, quantified by the same functional unit, and taking account of replacement based on the product reference service life (RSL) relative to an assumed building service life, can be used to assist purchasers and users in making informed comparisons between products. This EPD is meant for B2B communication.

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COMPANY DESCRIPTION

Rollease Acmeda innovates, designs and manufactures window covering hardware, automated shades and machinery for use in both commercial and residential applications.

Established in 1980, Rollease Acmeda has consistently been on the cutting edge of design, development and distribution within the industry. Due to their many years of experience and knowledge Rollease Acmeda is able to deliver a wider range of product options, modern technologies and a high-level of service to our customers. Rollease Acmeda serves all segments of the domestic and international window covering industry including OEMs, fabricators, workrooms, commercial contractors, interior designers, architects, retailers, internet and mail order catalogs.

STUDY GOAL

The intended application of the background life cycle assessment (LCA) study was to comply with the procedures for creating a Type III environmental product declaration (EPD) and publish the EPD for public review on the website, https://www.labelingsustainability.com/epd-registry. This level of study is in accordance with the product category rule (PCR) ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services, ISO 14044:2006 Environmental management, Life cycle assessment- Requirements and guidelines; and ISO 14040:2006 Environmental management, Life cycle assessment-Principles and framework. The performance of this study and its subsequent publishing is in alignment with the business-to-business (B2B) communication requirements for the environmental assessment of building products. This study does not intend to support comparative assertions and is intended to be disclosed to the public.

The project report was commissioned to differentiate Rollease Acmeda from their competition for the following reasons: generate an advantage for the organization; offer customers information to help them make informed product decisions; identify and quantify the environmental impacts associated with its Automate AC/DC motors to support future strategies for impact reduction based on measurable data and to strengthen Rollease Acmeda's license to operate in the community. The intended audience for this EPD report is Rollease Acmeda's employees, their suppliers, project specifiers of their products, architects, and engineers. The report is also available for policymakers, government officials interested in sustainability, academic professors, and LCA professionals. This EPD does not include product comparisons from other facilities.

PRODUCT DESCRIPTION AND APPLICATION

Rollease Acmeda Automate platform stands as the industry's premier solution for shade motorization and automation. Automate DC motors are an excellent choice for motorizing shades in residential spaces or light commercial projects. The collection comprises wire-free Li-ion battery-operated and wired AC/DC motors, coupled with accessory products, to deliver a reliable and enjoyable experience.

Automate Roller Shade Motors provide smooth and controlled operation with soft-stop functionality during ascent and descent to prevent shade damage. Designed for versatility, compatible with most roller and roman shade hardware systems. Automate motors deliver quiet and efficient performance with customizable settings that allow for slower, softer movement to meet the specific needs of any space.

PRODUCT DESIGN SUMMARY

The following table provides a list of the Automate motors considered in this EPD, along with key performance parameters.

Line Voltage Motors

Table 2: **Declared line voltage motors considered in this environmental product declaration.**

Prod #	Product	Product type	FU, Watt	Density, dry kg/FU	bio-carbon content, kg C/FU dry basis
1	MT01-1035-069001	Automate Roller Shade AC Motor	10	1.39	0.00
2	MT01-1045-069001	Automate Roller Shade AC Motor	10	3.93	0.00
3	MT01-1135-069002	Automate Roller Shade AC Motor	10	0.69	0.00
4	MT01-1145-069002	Automate Roller Shade AC Motor	10	1.36	0.00
5	MT01-1145-069003	Automate Roller Shade AC Motor	10	0.56	0.00
6	MT01-1145-069017	Automate Roller Shade AC Motor	10	0.43	0.00
7	MT01-1145-069018	Automate Roller Shade AC Motor	10	0.64	0.00

Battery-Powered Motors

Table 3: **Declared battery-powered motors considered in this environmental product declaration.**

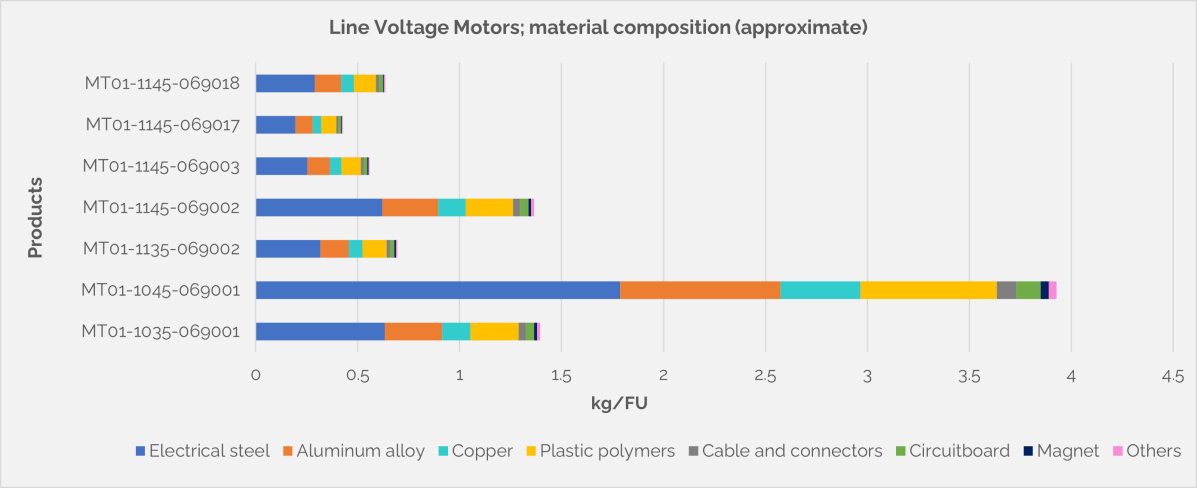
Prod#	Product	Product type	FU, Watt	Density, dry kg/FU	bio-carbon content, kg C/FU dry basis
1	MT01-1225-069002	Automate Roller Shade DC Motor	10	1.09	0.00
2	MT01-1225-069005	Automate Roller Shade DC Motor	10	0.77	0.00
3	MT01-1228-069002	Automate Roller Shade DC Motor	10	1.43	0.00
4	MT01-1235-069001	Automate Roller Shade DC Motor	10	0.70	0.00
5	MT01-1245-069002	Automate Roller Shade DC Motor	10	1.81	0.00
6	MT01-1325-069028-CT	Automate Roller Shade DC Motor	10	3.27	0.00
7	MT01-1325-069029-CT	Automate Roller Shade DC Motor	10	1.33	0.00
8	MT01-1325-069037-CT	Automate Roller Shade DC Motor	10	2.10	0.00
9	MT01-1328-069008-CT	Automate Roller Shade DC Motor	10	1.66	0.00
10	MT01-1335-069001	Automate Roller Shade DC Motor	10	2.36	0.00
11	MT01-1335-069002	Automate Roller Shade DC Motor	10	1.00	0.00
12	MT01-1345-069001	Automate Roller Shade DC Motor	10	4.39	0.00
13	MT01-1345-069002	Automate Roller Shade DC Motor	10	3.03	0.00
14	MT01-1345-069003	Automate Roller Shade DC Motor	10	2.21	0.00
15	MT01-1345-069004	Automate Roller Shade DC Motor	10	1.88	0.00
16	MT01-2101-069002	Automate Roller Shade DC Motor	10	0.55	0.00
17	MT01-3001-069001	Automate Roller Shade DC Motor	10	0.53	0.00
18	MT01-3101-067004	Automate Roller Shade DC Motor	10	0.70	0.00
19	MTAC45-20-M	Automate Roller Shade DC Motor	10	0.42	0.00
20	MTACML35-6	Automate Roller Shade DC Motor	10	0.80	0.00

21	MTACQ45-10-M	Automate Roller Shade DC Motor	10	1.41	0.00
22	MTACQML35-6	Automate Roller Shade DC Motor	10	0.93	0.00
23	MTACQRF35-6	Automate Roller Shade DC Motor	10	0.97	0.00
24	MTACRF45-15	Automate Roller Shade DC Motor	10	0.44	0.00
25	MTDCRF35-3	Automate Roller Shade DC Motor	10	1.28	0.00
26	MTDCRF45-10	Automate Roller Shade DC Motor	10	2.34	0.00
27	MTDCRF-CL-0.6-50	Automate Roller Shade DC Motor	10	0.45	0.00
28	MTDCRFQ45-3	Automate Roller Shade DC Motor	10	2.50	0.00

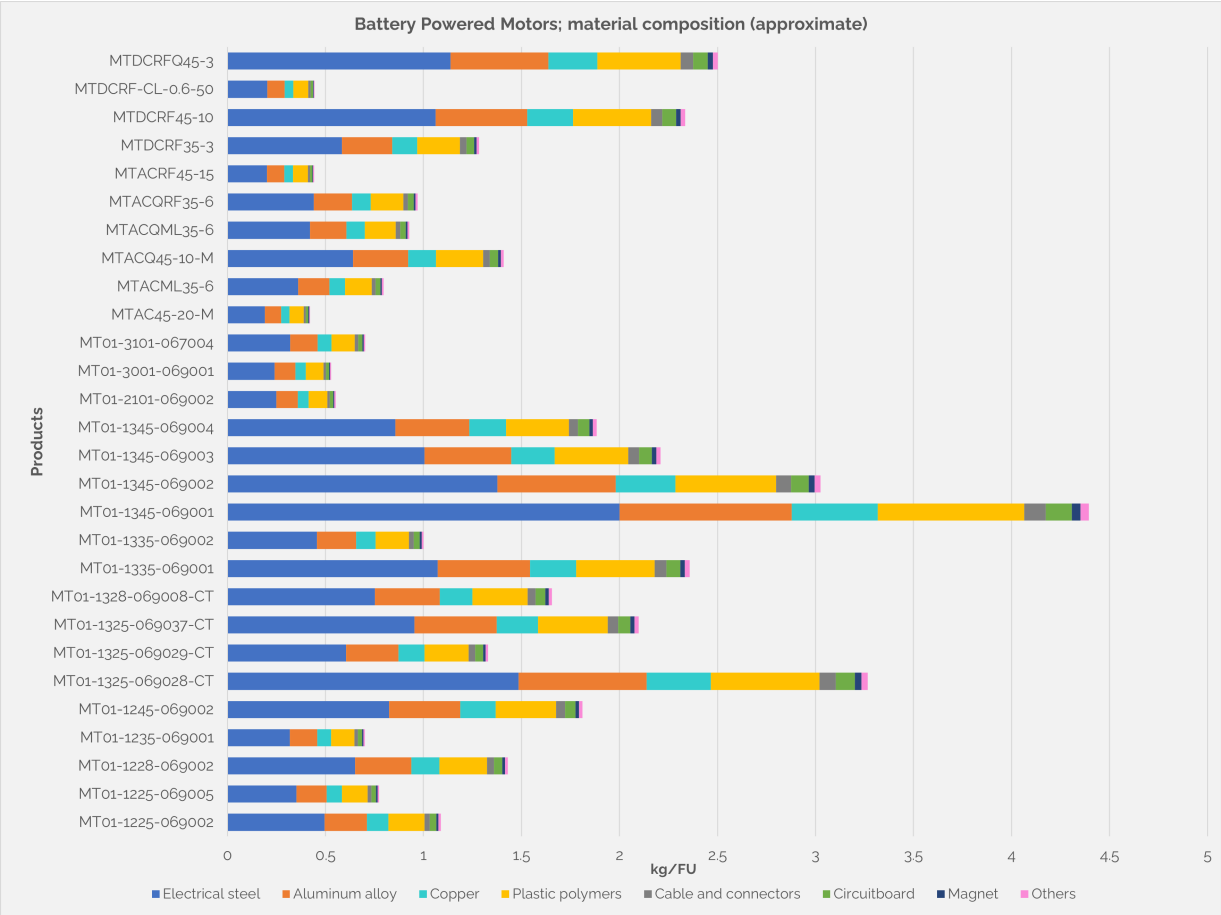
DESIGN COMPOSITION

The following figures provide the mass breakdown (kg/functional unit) of the material composition of each product considered in this declaration.

Line Voltage Motors:



Battery-Powered Motors:



TECHNICAL DATA

The following table presents the technical specifications of all declared products discussed in this study.

Table 4: **Technical information.**

Prod#	Product Name/ID	Nominal Torque, N-m	Angular Speed, rpm
1	MT01-1035-069001	6	24
2	MT01-1045-069001	10	9
3	MT01-1135-069002	6	33
4	MT01-1145-069002	10	21
5	MT01-1145-069003	15	32
6	MT01-1145-069017	50	13
7	MT01-1145-069018	30	13
8	MT01-1225-069002	1.1	20
9	MT01-1225-069005	1.1	28

10	MT01-1228-069002	2	20
11	MT01-1235-069001	6	20
12	MT01-1245-069002	6	20
13	MT01-1325-069028-CT	0.7	20
14	MT01-1325-069029-CT	1.1	28
15	MT01-1325-069037-CT	0.7	28
16	MT01-1328-069008-CT	2	28
17	MT01-1335-069001	3	20
18	MT01-1335-069002	6	20
19	MT01-1345-069001	3	20
20	MT01-1345-069002	10	9
21	MT01-1345-069003	6	20
22	MT01-1345-069004	13	11
23	MT01-2101-069002	1.2	120
24	MT01-3001-069001	0.8	45
25	MT01-3101-067004	1.2	34
26	MTAC45-20-M	20	32
27	MTACML35-6	6	33
28	MTACQ45-10-M	10	21
29	MTACQML35-6	6	24
30	MTACQRF35-6	6	24
31	MTACRF45-15	15	32
32	MTDCRF35-3	3	28
33	MTDCRF45-10	10	9
34	MTDCRF-CL-0.6-50	0.6	50
35	MTDCRFQ45-3	3	28

FLOW DIAGRAM

The following flow diagram illustrates the system boundaries, general activities and input requirements for the studied product system, and it is not necessarily exhaustive.

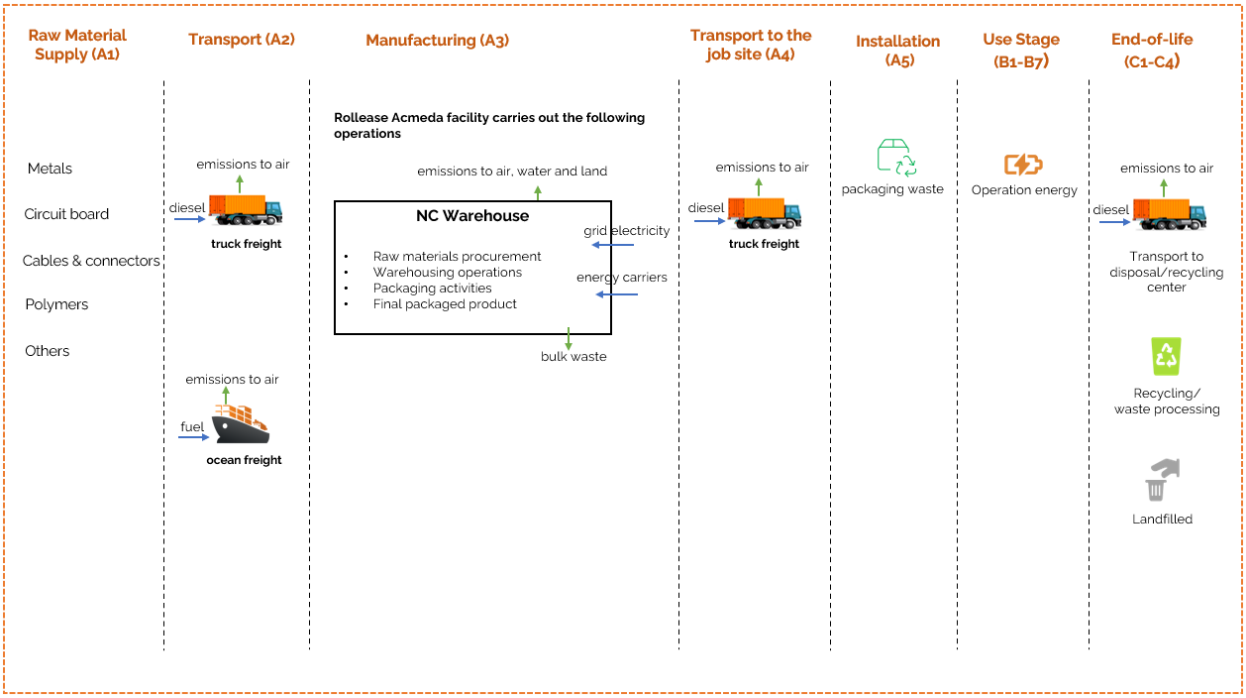


Figure 1: **General system inputs considered in the product system and categorized by modules in scope.**

LCA INFORMATION

Functional unit

A motor that can deliver a mechanical power output of 10 W for moving an object over its 10-year service life.

Reference service life

The lifespan of motors may vary depending on proper maintenance and operation. For this study, the reference service life (RSL) of Automate motors was set to 10 years.

System boundaries

The following figure depicts the cradle-to-grave system boundary considered in this study:

Life Cycle Impacts

A1-A3	A4-A5	B1-B7	C1-C4	Module D
PRODUCT STAGE	**INSTALLATION PROCESS STAGE**	**USE STAGE**	**END OF LIFE STAGE**	**BEYOND THE SYSTEM BOUNDARIES**
A1 Raw material supply **A2** Transport **A3** Manufacturing	**A4** Transport to site **A5** Installation Process	**B1** Use **B2** Maintenance **B3** Repaid **B4** Replacement **B5** Refurbishment **B6** Operational energy use **B7** Operational water use	**C1** De-installation/ Demolition **C2** Transport **C3** Waste processing **C4** Disposal of Waste	Reuse-Recovery-Recycling-potential
X	X	X	X	MND

Figure 2: **General life cycle phases for consideration in a construction works system. (X = declared module, MND = module not declared).**

The following life cycle stages (modules) are included and reported in this EPD, as applicable:

- A1: Raw material supply (upstream)
- A2: Transport to the factory
- A3: Manufacturing (core processes)
- A4: Transport to the jobsite
- A5: Installation
- B1: Use
- B2: Maintenance
- B3: Repair
- B4: Replacement
- B5: Refurbishment
- B6: Operational energy use
- B7: Operational water use
- C1: De-construction/demolition
- C2: Transport to disposal site
- C3: Waste processing
- C4: Disposal

The information module not declared in this study includes Module D – Benefits and loads beyond the system boundary.

In addition, according to the relevant PCR, the following requirements are excluded from this study:

- Production, manufacture and construction of A3 building/capital goods and infrastructure.
- Personnel-related activities (travel, furniture, office supplies);
- Energy use related to company management and sales activities.
- Packaging of incoming raw materials (e.g, plastic bags, pallets, etc.) is excluded, as it accounts for less than 1% of the product's mass.
- Research and development activities.
- Long-term emissions.

Upstream processes:

- All raw materials and components acquired by Rollease Acmeda for use in the products and packaging were considered in the assessment.
- Transportation of materials to the facility (A2) was based on primary data, including actual supplier distances, transport modes, and location details (city, state, country).

Core processes:

- All relevant processes (as applicable) at the given facility, including operational energy, fuel, equipment and waste management, were taken into account.
- National production mix from import, medium voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity to the production process (A3).

Electricity mix	Source	Amount	Unit
market for electricity, medium voltage/electricity, medium voltage/US-SERC/kWh	Ecoinvent 3.10.1	506.66	g CO2-eq/kWh

Downstream (gate-to-grave):

- **Product installation stage:** The average transport distance of 450 km was estimated for the customers located within the geographic scope of this EPD. No additional energy or material inputs are required during installation activities. Packaging waste generated at this stage was assumed to be 100% disposed of in a landfill, reflecting a conservative worst-case assumption.

- **Use stage:** Energy consumption during the use phase of the Automate motors is detailed in the 'Energy consumption calculation' section. For the servicing stage (maintenance, repair, and refurbishment), no such activities are considered necessary throughout its reference service life. However, a full product replacement is needed every 10 years of operation.

- **De-Construction:** Uninstallation is assumed to require no energy or material inputs.

- **Disposal:** Considering the mixed material composition of electrical motors, the end-of-life scenario assumes a recycling rate of 90%, primarily due to their high metal content, with the remaining 10% sent to landfill. Transport distance to the waste processing center was assumed to be 100 km, and 50 km was considered for final disposal.

Packaging:

The packaging materials used for roller shade motors include cardboard boxes and plastic shrink wraps. The end-of-life scenario assumes that 100% of the packaging waste generated at the construction site is landfilled.

Reporting period

This study is based on data representative of 12 months under review (01 Jan, 2024 to 31 Dec, 2024) for the product system.

Cut-off criteria

ISO 14044:2006 and the focus PCR requires the LCA model to contain a minimum of 95% of the total inflows (mass and energy) to the upstream and core modules be included in this study. The cut-off criteria were applied to all other processes unless otherwise noted above as follows. A 1% cut-off is considered for all renewable and non-renewable primary energy consumption and the total mass of inputs within a unit process where the total of the neglected inputs does not exceed 5%.

Allocation

This EPD follows the allocation guidelines of ISO 14044 and ISO 21930.

Where possible, allocation was avoided. When allocation was necessary, inputs and outputs were allocated based on a physical mass basis. Secondary material inputs adhere to the polluter pays principle. Accordingly, the environmental impacts attributed to these materials are limited to the treatment and transportation required to use them as a material input. As a default, secondary ecoinvent datasets apply allocation on a physical mass basis. The processing and recycling of the net

amount of scrap existing the system, defined as the difference between scrap outputs and secondary material inputs, fall outside the scope of this study.

The system boundary of this EPD is defined in accordance with the modularity principle as outlined in ISO 21930. All environmental impacts are assigned to the life cycle stages in which they occur, without allocation to other stages.

No known flows are deliberately excluded from this EPD.

ENERGY CONSUMPTION CALCULATION:

Battery-Powered Motors

Energy consumption associated with the use phase of battery-powered motors was modeled using the following equation. As the product operates on battery power and is not directly connected to the electricity grid, its energy consumption is limited to battery recharging over the reference service life.

$$\text{Consumption (kWh)} = (C * 365/D) * E * RSL$$

The variables are defined as,

C = no. of cycles per day [number]

D = battery duration with 1 charge [no. of cycles]

E = electricity needed for 1 complete charge [kWh]

RSL = reference service life [years]

Table 5 highlights the technical parameters and assumptions applied to model energy consumption during the use phase of battery-powered motors.

Table 5: **Technical parameters for modeling energy consumption in the use profile of battery-powered motors.**

Name	Unit	Value
Number of cycles per day (C)*	number	1
Battery duration with 1 charge (D)	no. of cycles	500
Electricity needed for 1 complete charge (E)	kWh	0.040
Reference service life (RSL)	years	10

*The complete opening and closing of an application

Line Voltage Motors

Energy consumption in the use phase of line-voltage motors was calculated using the following equation. As these motors operate directly on grid electricity, their consumption was determined based on rated electrical input, power factor and operating hours over the reference service life.

$$\text{Consumption (kWh)} = C * t/3600 * P_{input} * 365 * RSL$$

where,

$$P_{input} = V * I * PF$$

The variables are defined as,

C = no. of cycles per day [number]

t = run time per cycle [sec]

RSL = reference service life [years]

P_{input} = electrical input power [kW]

V = voltage [volt]

I = rated current [amp]

PF = power factor

Table 6 highlights the technical parameters and assumptions applied to model energy consumption during the use phase of line voltage motors.

Table 6: **Technical parameters for modeling energy consumption in the use profile of line voltage motors.**

Name	Unit	Value
Number of cycles per day (C)*	number	1
Time for performing one operation cycle (t)	sec	60
Reference service life (RSL)	years	10
Power factor (PF)	dimensionless	0.60

Preferred waste management:

At the end of the product service life, motor products should follow a sustainable cycle through responsible recycling wherever feasible. Materials that are not suitable for recycling shall be managed through appropriate waste treatment and disposal practices. The disposal should follow industry standard practices and regional waste management regulations. Waste materials may be directed to municipal landfills or commercial incineration facilities, ensuring full compliance with local, state, and federal requirements.

DATA SOURCES

Specific data for the product composition are provided by the manufacturer. The data represents the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to ISO 21930, EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below. There are no data gaps in the study, should any data gaps be identified, they are handled on an individual case basis.

Table 7: **LCI inputs assumed for module A1 (i.e. raw material inputs)**

Materials Input	Source	Data Quality	Year
low-alloyed steel, hot rolled	ecoinvent 3.10.1	Database	2023
aluminium wrought alloy	ecoinvent 3.10.1	Database	2023
copper, cathode	ecoinvent 3.10.1	Database	2023
polycarbonate	ecoinvent 3.10.1	Database	2023
permanent magnet, for electric motor	ecoinvent 3.10.1	Database	2023
cable	ecoinvent 3.10.1	Database	2023

printed wiring board	ecoinvent 3.10.1	Database	2023
epoxy resin	ecoinvent 3.10.1	Database	2023
graphite	ecoinvent 3.10.1	Database	2023
metal working, for steel product manufacturing	ecoinvent 3.10.1	Database	2023
metal working, for aluminium product manufacturing	ecoinvent 3.10.1	Database	2023
powder coat, steel	ecoinvent 3.10.1	Database	2023
wire drawing	ecoinvent 3.10.1	Database	2023
injection moulding	ecoinvent 3.10.1	Database	2023

DATA QUALITY ASSESSMENT

Data quality/variability requirements, as specified in the PCR, are applied. This section describes the achieved data quality relative to the ISO 14044:2006 requirements. Data quality is judged based on its precision (measured, calculated or estimated), completeness (e.g., unreported emissions), consistency (degree of uniformity of the methodology applied within a study serving as a data source) and representativeness (geographical, temporal, and technological).

Precision:

Through measurement and calculation, the manufacturers collected and provided primary data on their annual production. The product-specific data derived from specific production processes was used for modeling the life cycle of the declared products. For accuracy, the LCA practitioner and 3rd Party Verifier validated the plant gate-to-gate data.

Completeness:

All relevant specific processes, including inputs (raw materials, energy, and ancillary materials) and outputs (emissions and production volume) were considered and modeled to represent the specified and declared products. The majority of relevant background materials and processes were sourced from the ecoinvent LCI datasets, which utilize relatively recent region-specific electricity inputs. The most relevant EPDs requiring key A1 inputs were also used where readily available.

Consistency:

To ensure consistency, the same modeling structure across the respective product systems was utilized for all inputs, which consisted of raw material inputs and ancillary material, energy flows, water resource inputs, product and co-products outputs, returned and recovered materials, emissions to air, water and soil, and waste recycling and treatment. The same background LCI datasets from the ecoinvent database were used across all product systems. Cross-checks concerning the plausibility of mass and energy flows were continuously conducted. The LCA team conducted mass and energy balances at the plant and selected process level to maintain a high level of consistency.

Reproducibility:

Internal reproducibility is possible since the data and the models are stored and available in a machine-readable project file for all foreground and background processes. A considerable level of transparency is provided throughout the detailed LCA report as the specifications and material quantity make-up for the declared products are presented, and key primary and secondary LCI data sources

are summarized. The provision of more detailed publicly accessible data to allow full external reproducibility was not possible due to reasons of confidentiality.

Representativeness:

The representativeness of the data is summarized as follows**:**

- Time related coverage of the manufacturing processes' primary collected data from 2024-01-01 to 2024-12-31.
- Upstream (background) LCI data were either the PCR-specified default (if applicable) or more appropriate LCI datasets as found in the country-adjusted ecoinvent database.
- Geographical coverage for inputs required by the A3 facility is representative of its region of focus; other upstream and background processes are based on US, North American, or global average data and adjusted to regional electricity mixes when relevant.
- Technological coverage is typical or average and specific to the participating facilities for all primary data.

Treatment of Missing Data:

In this study, missing data were not averaged as zeros; data gaps were addressed using default assumptions provided by the Product Category Rules (PCR), or through verified sources such as the ecoinvent database. Secondary sources such as LCA databases (e.g., ecoinvent) and industry-specific literature were consulted when primary data was unavailable. In cases where neither primary nor secondary data was accessible, analogous processes or materials were selected as proxies, ensuring that their selection was well-reasoned and appropriately justified. Missing data were minimized to the extent possible. Any remaining data gaps were filled with conservative estimates that do not significantly influence the overall LCA results.

Sources of Data:

All manufacturing processes were based on primary data. For raw materials, facility-specific supplier-provided data was utilized whenever it was accessible. In the absence of primary data, relevant secondary data from the ecoinvent database were used to represent the production of raw materials.

Uncertainty:

Primary data was collected for over 95% of the processes involved. As such, uncertainty is considered low and does not significantly influence the overall LCA results. In instances where primary data was unavailable, representative datasets were employed that closely reflect the regional and temporal scope of the project.

ASSUMPTIONS AND ESTIMATES

All estimates and assumptions are within the requirements of ISO 14040/44. Certain assumptions made in this study may have influenced the results are:

- The weights of each packaging material used were estimated based on industry averages.
- Region-specific electricity was modeled to represent the electricity mix for A3 warehousing

operations, while the average U.S. electricity mix, low-voltage, was modeled for operational energy use using the ecoinvent database v3.10.1.

- The allocation of inputs and outputs is based on physical characteristics, i.e., mass basis.
- Electricity consumption for warehouse storage (A3) was modeled following the Product Environmental Footprint method (Zampori L & Pant, 2019).

ENVIRONMENTAL INDICATORS AND INVENTORY METRICS

Per the PCR, this EPD supports the life cycle impact assessment indicators and inventory metrics as listed in the tables below. As specified in the PCR, the most recent US EPA Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI), impact categories were utilized as they provide a North American context for the mandatory category indicators to be included in the EPD. Additionally, the PCR requires a set of inventory metrics to be reported with the LCIA indicators (see tables below).

The following LCIA methods were used to report the LCI results:

- IPCC 2013 developed the Intergovernmental Panel on Climate Change based on Fifth Assessment Report (AR5).
- TRACI (Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts), developed by the U.S. EPA.
- CML-IA, developed at Leiden University.

Characterization factors were applied using established LCIA methods, including TRACI 2.1 (Bare et al., 2012), CML-IA (v4.8, 2016) (Guinée et al., 2016), and IPCC 2013 (AR5) to convert inventory data into potential environmental impacts.

Table 8: **Life cycle impact categories and life cycle inventory metrics.**

LCIA indicators	Abbrev.	Unit	Reference Method/Guidance
Climate change: global warming potential	GWP100	kg CO2-eq	IPCC AR5 (2013)
Ozone depletion: ozone depletion potential (ODP)	ODP	kg CFC-11-eq	TRACI 2.1
Acidification: acidification potential (AP)	AP	kg SO2-eq	TRACI 2.1
Eutrophication: eutrophication potential	EP	kg N-eq	TRACI 2.1
Smog formation potential	SFP	kg O3-eq	TRACI 2.1
Energy resources: non-renewable: abiotic depletion potential (ADP): fossil fuels	ADPfossil	MJ	CML-IA 4.8 (2016)
Inventory metrics			
Inventory indicators ISO21930: Cumulative Energy Demand - renewable energy resources	RPRE	MJ	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: Renewable primary resources with energy content used as material (i.e., PERM)	RPRM	MJ	ISO 21930:2017; ACLCA Guidance (2019)

Inventory indicators ISO21930: Cumulative Energy Demand - non-renewable energy resources	NRPRE	MJ	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: Non-renewable primary resources with energy content used as material (i.e., PENRM)	NRPRM	MJ	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: use of secondary material	SM	kg	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: use of renewable secondary fuels	RSF	MJ	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: use of non-renewable secondary fuels	NRSF	MJ	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: recovered energy	RE	MJ	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: use of net fresh water	FW	m3	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: hazardous waste disposed	HWD	kg	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: non-hazardous waste disposed	NHWD	kg	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: radioactive waste disposed	RWD	kg	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: materials for recycling	MR	kg	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: materials for energy recovery	MER	kg	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: exported energy - electricity	EEE	MJ	ISO 21930:2017; ACLCA Guidance (2019)
Inventory indicators ISO21930: exported energy – heat/thermal	EET	MJ	ISO 21930:2017; ACLCA Guidance (2019)

It should be noted that emerging LCA impact categories and inventory items are still under development and can have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in any of the following categories.

- Renewable primary energy resources as energy (fuel);
- Renewable primary resources as material;
- Non-renewable primary resources as energy (fuel);
- Non-renewable primary resources as material;
- Secondary Materials;
- Renewable secondary fuels;
- Non-renewable secondary fuels;
- Recovered energy;
- Abiotic depletion potential for non-fossil mineral resources.
- Land use related impacts, for example on biodiversity and/or soil fertility;
- Toxicological aspects;
- Emissions from land use change [GWP 100 (land-use change)];
- Hazardous waste disposed;
- Non-hazardous waste disposed;
- Radioactive waste disposed;

- Components for reuse;
- Materials for recycling;
- Materials for energy recovery;
- Recovered energy exported from the product system.

TOTAL IMPACT SUMMARY

The following table reports the total LCA results for each declared product produced at a given facility on a per functional unit basis.

The LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

These six impact categories are globally deemed mature enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development. However, the EPD users shall not use additional measures for comparative purposes. Toxicity impacts shall be reported under "Additional Environmental Information".

Table 9: **Total life cycle (across modules in scope) impact results for all declared products, on a per functional unit basis.**

a) Midpoint Impact Categories:

Indicator/LCI Metric	[a]GWP100 (kg CO2-eq)									
Products	Life cycle stage									
	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4
MT01-1035-069001	1.45E+01	1.52E-01	2.80E-01	0.00	1.16E+00	0.00	0.00	3.20E-02	0.00	3.97E-04
MT01-1045-069001	4.03E+01	4.28E-01	4.48E-01	0.00	2.19E+00	0.00	0.00	9.03E-02	0.00	1.12E-03
MT01-1135-069002	7.33E+00	7.57E-02	2.03E-01	0.00	1.86E+00	0.00	0.00	1.60E-02	0.00	1.98E-04
MT01-1145-069002	1.41E+01	1.48E-01	1.92E-01	0.00	2.19E+00	0.00	0.00	3.13E-02	0.00	3.89E-04
MT01-1145-069003	5.77E+00	6.06E-02	8.52E-02	0.00	3.79E+00	0.00	0.00	1.28E-02	0.00	1.59E-04
MT01-1145-069017	4.40E+00	4.64E-02	6.32E-02	0.00	5.25E+00	0.00	0.00	9.79E-03	0.00	1.21E-04
MT01-1145-069018	6.56E+00	6.93E-02	1.04E-01	0.00	3.50E+00	0.00	0.00	1.46E-02	0.00	1.81E-04
MT01-1225-069002	1.39E+01	1.18E-01	1.84E+00	0.00	1.46E-01	0.00	0.00	2.50E-02	0.00	3.10E-04
MT01-1225-069005	9.87E+00	8.43E-02	1.31E+00	0.00	1.46E-01	0.00	0.00	1.78E-02	0.00	2.20E-04
MT01-1228-069002	1.60E+01	1.56E-01	1.01E+00	0.00	1.46E-01	0.00	0.00	3.29E-02	0.00	4.08E-04
MT01-1235-069001	7.71E+00	7.62E-02	3.35E-01	0.00	1.46E-01	0.00	0.00	1.61E-02	0.00	1.99E-04
MT01-1245-069002	1.88E+01	1.97E-01	3.35E-01	0.00	1.46E-01	0.00	0.00	4.17E-02	0.00	5.17E-04
MT01-1325-069028-CT	3.75E+01	3.55E-01	2.87E+00	0.00	1.46E-01	0.00	0.00	7.50E-02	0.00	9.30E-04
MT01-1325-069029-CT	1.55E+01	1.45E-01	1.31E+00	0.00	1.46E-01	0.00	0.00	3.06E-02	0.00	3.79E-04
MT01-1325-069037-CT	2.44E+01	2.28E-01	2.06E+00	0.00	1.46E-01	0.00	0.00	4.82E-02	0.00	5.98E-04
MT01-1328-069008-CT	1.79E+01	1.80E-01	7.20E-01	0.00	1.46E-01	0.00	0.00	3.80E-02	0.00	4.71E-04
MT01-1335-069001	2.48E+01	2.57E-01	6.74E-01	0.00	1.46E-01	0.00	0.00	5.42E-02	0.00	6.71E-04
MT01-1335-069002	1.06E+01	1.09E-01	3.35E-01	0.00	1.46E-01	0.00	0.00	2.30E-02	0.00	2.85E-04
MT01-1345-069001	4.54E+01	4.78E-01	6.74E-01	0.00	1.46E-01	0.00	0.00	1.01E-01	0.00	1.25E-03
MT01-1345-069002	3.12E+01	3.29E-01	4.48E-01	0.00	1.46E-01	0.00	0.00	6.95E-02	0.00	8.62E-04
MT01-1345-069003	2.28E+01	2.41E-01	3.35E-01	0.00	1.46E-01	0.00	0.00	5.08E-02	0.00	6.30E-04

MT01-1345-069004	1.95E+01	2.05E-01	2.83E-01	0.00	1.46E-01	0.00	0.00	4.33E-02	0.00	5.37E-04
MT01-2101-069002	6.03E+00	5.99E-02	2.80E-01	0.00	1.46E-01	0.00	0.00	1.26E-02	0.00	1.57E-04
MT01-3001-069001	7.10E+00	5.78E-02	1.12E+00	0.00	1.46E-01	0.00	0.00	1.22E-02	0.00	1.51E-04
MT01-3101-067004	8.65E+00	7.65E-02	9.90E-01	0.00	1.46E-01	0.00	0.00	1.62E-02	0.00	2.00E-04
MTAC45-20-M	4.35E+00	4.58E-02	6.32E-02	0.00	1.46E-01	0.00	0.00	9.68E-03	0.00	1.20E-04
MTACML35-6	8.35E+00	8.67E-02	2.03E-01	0.00	1.46E-01	0.00	0.00	1.83E-02	0.00	2.27E-04
MTACQ45-10-M	1.45E+01	1.53E-01	1.92E-01	0.00	1.46E-01	0.00	0.00	3.24E-02	0.00	4.02E-04
MTACQML35-6	9.80E+00	1.01E-01	2.80E-01	0.00	1.46E-01	0.00	0.00	2.13E-02	0.00	2.64E-04
MTACQRF35-6	1.02E+01	1.05E-01	2.80E-01	0.00	1.46E-01	0.00	0.00	2.22E-02	0.00	2.76E-04
MTACRF45-15	4.57E+00	4.83E-02	8.52E-02	0.00	1.46E-01	0.00	0.00	1.02E-02	0.00	1.26E-04
MTDCRF35-3	1.37E+01	1.40E-01	4.81E-01	0.00	1.46E-01	0.00	0.00	2.95E-02	0.00	3.66E-04
MTDCRF45-10	2.42E+01	2.54E-01	4.48E-01	0.00	1.46E-01	0.00	0.00	5.37E-02	0.00	6.65E-04
MTDCRF-CL-0.6-50	6.58E+00	4.86E-02	1.34E+00	0.00	1.46E-01	0.00	0.00	1.02E-02	0.00	1.27E-04
MTDCRFQ45-3	2.60E+01	2.72E-01	4.81E-01	0.00	1.46E-01	0.00	0.00	5.75E-02	0.00	7.12E-04
	ODP (kg CFC-11-eq)									
MT01-1035-069001	2.27E-07	2.51E-09	3.60E-11	0.00	8.92E-09	0.00	0.00	5.29E-10	0.00	6.00E-12
MT01-1045-069001	6.30E-07	7.07E-09	5.90E-11	0.00	1.68E-08	0.00	0.00	1.49E-09	0.00	1.70E-11
MT01-1135-069002	1.15E-07	1.25E-09	2.70E-11	0.00	1.43E-08	0.00	0.00	2.64E-10	0.00	3.00E-12
MT01-1145-069002	2.20E-07	2.46E-09	2.50E-11	0.00	1.68E-08	0.00	0.00	5.18E-10	0.00	6.00E-12
MT01-1145-069003	9.04E-08	1.00E-09	1.10E-11	0.00	2.91E-08	0.00	0.00	2.12E-10	0.00	2.00E-12
MT01-1145-069017	6.88E-08	7.67E-10	9.00E-12	0.00	4.04E-08	0.00	0.00	1.62E-10	0.00	2.00E-12
MT01-1145-069018	1.02E-07	1.15E-09	1.40E-11	0.00	2.69E-08	0.00	0.00	2.42E-10	0.00	3.00E-12
MT01-1225-069002	2.23E-07	1.96E-09	2.40E-10	0.00	1.12E-09	0.00	0.00	4.13E-10	0.00	5.00E-12
MT01-1225-069005	1.58E-07	1.39E-09	1.71E-10	0.00	1.12E-09	0.00	0.00	2.94E-10	0.00	3.00E-12
MT01-1228-069002	2.53E-07	2.58E-09	1.32E-10	0.00	1.12E-09	0.00	0.00	5.45E-10	0.00	6.00E-12
MT01-1235-069001	1.21E-07	1.26E-09	4.40E-11	0.00	1.12E-09	0.00	0.00	2.66E-10	0.00	3.00E-12
MT01-1245-069002	2.93E-07	3.27E-09	4.40E-11	0.00	1.12E-09	0.00	0.00	6.89E-10	0.00	8.00E-12
MT01-1325-069028-CT	5.93E-07	5.88E-09	3.75E-10	0.00	1.12E-09	0.00	0.00	1.24E-09	0.00	1.40E-11
MT01-1325-069029-CT	2.45E-07	2.40E-09	1.71E-10	0.00	1.12E-09	0.00	0.00	5.06E-10	0.00	6.00E-12
MT01-1325-069037-CT	3.87E-07	3.78E-09	2.69E-10	0.00	1.12E-09	0.00	0.00	7.97E-10	0.00	9.00E-12
MT01-1328-069008-CT	2.81E-07	2.98E-09	9.40E-11	0.00	1.12E-09	0.00	0.00	6.29E-10	0.00	7.00E-12
MT01-1335-069001	3.89E-07	4.24E-09	8.80E-11	0.00	1.12E-09	0.00	0.00	8.96E-10	0.00	1.00E-11
MT01-1335-069002	1.66E-07	1.80E-09	4.40E-11	0.00	1.12E-09	0.00	0.00	3.81E-10	0.00	4.00E-12
MT01-1345-069001	7.09E-07	7.91E-09	8.80E-11	0.00	1.12E-09	0.00	0.00	1.67E-09	0.00	1.90E-11
MT01-1345-069002	4.87E-07	5.45E-09	5.90E-11	0.00	1.12E-09	0.00	0.00	1.15E-09	0.00	1.30E-11
MT01-1345-069003	3.56E-07	3.98E-09	4.40E-11	0.00	1.12E-09	0.00	0.00	8.40E-10	0.00	1.00E-11
MT01-1345-069004	3.04E-07	3.39E-09	3.60E-11	0.00	1.12E-09	0.00	0.00	7.16E-10	0.00	8.00E-12
MT01-2101-069002	9.54E-08	9.90E-10	3.60E-11	0.00	1.12E-09	0.00	0.00	2.09E-10	0.00	2.00E-12
MT01-3001-069001	1.15E-07	9.56E-10	1.46E-10	0.00	1.12E-09	0.00	0.00	2.02E-10	0.00	2.00E-12
MT01-3101-067004	1.38E-07	1.27E-09	1.29E-10	0.00	1.12E-09	0.00	0.00	2.67E-10	0.00	3.00E-12
MTAC45-20-M	6.84E-08	7.58E-10	9.00E-12	0.00	1.12E-09	0.00	0.00	1.60E-10	0.00	2.00E-12
MTACML35-6	1.31E-07	1.43E-09	2.70E-11	0.00	1.12E-09	0.00	0.00	3.03E-10	0.00	4.00E-12
MTACQ45-10-M	2.26E-07	2.54E-09	2.50E-11	0.00	1.12E-09	0.00	0.00	5.36E-10	0.00	6.00E-12
MTACQML35-6	1.54E-07	1.67E-09	3.60E-11	0.00	1.12E-09	0.00	0.00	3.53E-10	0.00	4.00E-12
MTACQRF35-6	1.60E-07	1.74E-09	3.60E-11	0.00	1.12E-09	0.00	0.00	3.67E-10	0.00	4.00E-12
MTACRF45-15	7.12E-08	7.99E-10	1.10E-11	0.00	1.12E-09	0.00	0.00	1.69E-10	0.00	2.00E-12
MTDCRF35-3	2.16E-07	2.31E-09	6.30E-11	0.00	1.12E-09	0.00	0.00	4.88E-10	0.00	6.00E-12
MTDCRF45-10	3.79E-07	4.20E-09	5.90E-11	0.00	1.12E-09	0.00	0.00	8.88E-10	0.00	1.00E-11
MTDCRF-CL-0.6-50	1.07E-07	8.03E-10	1.76E-10	0.00	1.12E-09	0.00	0.00	1.70E-10	0.00	2.00E-12

MTDCRFQ45-3	4.06E-07	4.50E-09	6.30E-11	0.00	1.12E-09	0.00	0.00	9.50E-10	0.00	1.10E-11
AP (kg SO2-eq)										
MT01-1035-069001	1.04E-01	2.96E-04	8.66E-05	0.00	2.38E-03	0.00	0.00	6.24E-05	0.00	3.26E-06
MT01-1045-069001	2.92E-01	8.34E-04	1.38E-04	0.00	4.50E-03	0.00	0.00	1.76E-04	0.00	9.18E-06
MT01-1135-069002	5.21E-02	1.47E-04	6.29E-05	0.00	3.82E-03	0.00	0.00	3.11E-05	0.00	1.62E-06
MT01-1145-069002	1.02E-01	2.89E-04	5.95E-05	0.00	4.50E-03	0.00	0.00	6.11E-05	0.00	3.19E-06
MT01-1145-069003	4.16E-02	1.18E-04	2.63E-05	0.00	7.79E-03	0.00	0.00	2.50E-05	0.00	1.30E-06
MT01-1145-069017	3.19E-02	9.04E-05	1.95E-05	0.00	1.08E-02	0.00	0.00	1.91E-05	0.00	9.96E-07
MT01-1145-069018	4.75E-02	1.35E-04	3.23E-05	0.00	7.20E-03	0.00	0.00	2.85E-05	0.00	1.49E-06
MT01-1225-069002	8.91E-02	2.31E-04	5.67E-04	0.00	3.00E-04	0.00	0.00	4.87E-05	0.00	2.54E-06
MT01-1225-069005	6.32E-02	1.64E-04	4.04E-04	0.00	3.00E-04	0.00	0.00	3.47E-05	0.00	1.81E-06
MT01-1228-069002	1.10E-01	3.04E-04	3.12E-04	0.00	3.00E-04	0.00	0.00	6.42E-05	0.00	3.35E-06
MT01-1235-069001	5.90E-02	1.49E-04	1.04E-04	0.00	3.00E-04	0.00	0.00	3.14E-05	0.00	1.64E-06
MT01-1245-069002	1.35E-01	3.85E-04	1.04E-04	0.00	3.00E-04	0.00	0.00	8.13E-05	0.00	4.24E-06
MT01-1325-069028-CT	2.55E-01	6.93E-04	8.87E-04	0.00	3.00E-04	0.00	0.00	1.46E-04	0.00	7.63E-06
MT01-1325-069029-CT	1.04E-01	2.82E-04	4.04E-04	0.00	3.00E-04	0.00	0.00	5.96E-05	0.00	3.11E-06
MT01-1325-069037-CT	1.65E-01	4.45E-04	6.37E-04	0.00	3.00E-04	0.00	0.00	9.40E-05	0.00	4.90E-06
MT01-1328-069008-CT	1.26E-01	3.51E-04	2.22E-04	0.00	3.00E-04	0.00	0.00	7.42E-05	0.00	3.87E-06
MT01-1335-069001	1.77E-01	5.00E-04	2.08E-04	0.00	3.00E-04	0.00	0.00	1.06E-04	0.00	5.51E-06
MT01-1335-069002	7.54E-02	2.13E-04	1.04E-04	0.00	3.00E-04	0.00	0.00	4.49E-05	0.00	2.34E-06
MT01-1345-069001	3.28E-01	9.33E-04	2.08E-04	0.00	3.00E-04	0.00	0.00	1.97E-04	0.00	1.03E-05
MT01-1345-069002	2.26E-01	6.42E-04	1.38E-04	0.00	3.00E-04	0.00	0.00	1.36E-04	0.00	7.07E-06
MT01-1345-069003	1.65E-01	4.69E-04	1.04E-04	0.00	3.00E-04	0.00	0.00	9.91E-05	0.00	5.17E-06
MT01-1345-069004	1.40E-01	4.00E-04	8.74E-05	0.00	3.00E-04	0.00	0.00	8.44E-05	0.00	4.40E-06
MT01-2101-069002	4.22E-02	1.17E-04	8.66E-05	0.00	3.00E-04	0.00	0.00	2.46E-05	0.00	1.29E-06
MT01-3001-069001	4.44E-02	1.13E-04	3.46E-04	0.00	3.00E-04	0.00	0.00	2.38E-05	0.00	1.24E-06
MT01-3101-067004	5.68E-02	1.49E-04	3.06E-04	0.00	3.00E-04	0.00	0.00	3.15E-05	0.00	1.64E-06
MTAC45-20-M	3.16E-02	8.93E-05	1.95E-05	0.00	3.00E-04	0.00	0.00	1.89E-05	0.00	9.84E-07
MTACML35-6	5.98E-02	1.69E-04	6.29E-05	0.00	3.00E-04	0.00	0.00	3.57E-05	0.00	1.86E-06
MTACQ45-10-M	1.05E-01	2.99E-04	5.95E-05	0.00	3.00E-04	0.00	0.00	6.32E-05	0.00	3.30E-06
MTACQML35-6	6.99E-02	1.97E-04	8.66E-05	0.00	3.00E-04	0.00	0.00	4.16E-05	0.00	2.17E-06
MTACQRF35-6	7.28E-02	2.05E-04	8.66E-05	0.00	3.00E-04	0.00	0.00	4.34E-05	0.00	2.26E-06
MTACRF45-15	3.29E-02	9.42E-05	2.63E-05	0.00	3.00E-04	0.00	0.00	1.99E-05	0.00	1.04E-06
MTDCRF35-3	9.71E-02	2.73E-04	1.49E-04	0.00	3.00E-04	0.00	0.00	5.75E-05	0.00	3.00E-06
MTDCRF45-10	1.74E-01	4.96E-04	1.38E-04	0.00	3.00E-04	0.00	0.00	1.05E-04	0.00	5.46E-06
MTDCRF-CL-0.6-50	3.92E-02	9.47E-05	4.15E-04	0.00	3.00E-04	0.00	0.00	2.00E-05	0.00	1.04E-06
MTDCRFQ45-3	1.87E-01	5.31E-04	1.49E-04	0.00	3.00E-04	0.00	0.00	1.12E-04	0.00	5.84E-06
EP (kg N-eq)										
MT01-1035-069001	2.00E+00	1.48E-04	3.51E-03	0.00	9.46E+00	0.00	0.00	3.12E-05	0.00	3.89E-07
MT01-1045-069001	3.47E+00	4.17E-04	5.63E-03	0.00	1.79E+01	0.00	0.00	8.80E-05	0.00	1.10E-06
MT01-1135-069002	1.41E+00	7.37E-05	2.57E-03	0.00	1.52E+01	0.00	0.00	1.56E-05	0.00	1.94E-07
MT01-1145-069002	1.42E+00	1.45E-04	2.43E-03	0.00	1.79E+01	0.00	0.00	3.05E-05	0.00	3.81E-07
MT01-1145-069003	6.12E-01	5.91E-05	1.05E-03	0.00	3.09E+01	0.00	0.00	1.25E-05	0.00	1.55E-07
MT01-1145-069017	4.70E-01	4.52E-05	7.73E-04	0.00	4.28E+01	0.00	0.00	9.54E-06	0.00	1.19E-07
MT01-1145-069018	7.45E-01	6.76E-05	1.31E-03	0.00	2.86E+01	0.00	0.00	1.43E-05	0.00	1.78E-07
MT01-1225-069002	1.20E+01	1.15E-04	2.30E-02	0.00	1.19E+00	0.00	0.00	2.43E-05	0.00	3.03E-07
MT01-1225-069005	8.52E+00	8.21E-05	1.64E-02	0.00	1.19E+00	0.00	0.00	1.73E-05	0.00	2.16E-07
MT01-1228-069002	6.69E+00	1.52E-04	1.26E-02	0.00	1.19E+00	0.00	0.00	3.21E-05	0.00	4.00E-07

MT01-1235-069001	2.27E+00	7.43E-05	4.21E-03	0.00	1.19E+00	0.00	0.00	1.57E-05	0.00	1.95E-07
MT01-1245-069002	2.42E+00	1.92E-04	4.21E-03	0.00	1.19E+00	0.00	0.00	4.06E-05	0.00	5.06E-07
MT01-1325-069028-CT	1.90E+01	3.46E-04	3.60E-02	0.00	1.19E+00	0.00	0.00	7.31E-05	0.00	9.11E-07
MT01-1325-069029-CT	8.60E+00	1.41E-04	1.64E-02	0.00	1.19E+00	0.00	0.00	2.98E-05	0.00	3.71E-07
MT01-1325-069037-CT	1.36E+01	2.23E-04	2.58E-02	0.00	1.19E+00	0.00	0.00	4.70E-05	0.00	5.86E-07
MT01-1328-069008-CT	4.89E+00	1.76E-04	9.03E-03	0.00	1.19E+00	0.00	0.00	3.71E-05	0.00	4.62E-07
MT01-1335-069001	4.67E+00	2.50E-04	8.44E-03	0.00	1.19E+00	0.00	0.00	5.28E-05	0.00	6.58E-07
MT01-1335-069002	2.31E+00	1.06E-04	4.21E-03	0.00	1.19E+00	0.00	0.00	2.24E-05	0.00	2.80E-07
MT01-1345-069001	4.96E+00	4.66E-04	8.44E-03	0.00	1.19E+00	0.00	0.00	9.84E-05	0.00	1.23E-06
MT01-1345-069002	3.34E+00	3.21E-04	5.63E-03	0.00	1.19E+00	0.00	0.00	6.77E-05	0.00	8.44E-07
MT01-1345-069003	2.48E+00	2.35E-04	4.21E-03	0.00	1.19E+00	0.00	0.00	4.95E-05	0.00	6.17E-07
MT01-1345-069004	2.07E+00	2.00E-04	3.53E-03	0.00	1.19E+00	0.00	0.00	4.22E-05	0.00	5.26E-07
MT01-2101-069002	1.88E+00	5.83E-05	3.51E-03	0.00	1.19E+00	0.00	0.00	1.23E-05	0.00	1.54E-07
MT01-3001-069001	7.30E+00	5.63E-05	1.40E-02	0.00	1.19E+00	0.00	0.00	1.19E-05	0.00	1.48E-07
MT01-3101-067004	6.47E+00	7.46E-05	1.24E-02	0.00	1.19E+00	0.00	0.00	1.57E-05	0.00	1.96E-07
MTAC45-20-M	4.69E-01	4.47E-05	7.73E-04	0.00	1.19E+00	0.00	0.00	9.43E-06	0.00	1.18E-07
MTACML35-6	1.42E+00	8.44E-05	2.57E-03	0.00	1.19E+00	0.00	0.00	1.78E-05	0.00	2.22E-07
MTACQ45-10-M	1.43E+00	1.50E-04	2.43E-03	0.00	1.19E+00	0.00	0.00	3.16E-05	0.00	3.94E-07
MTACQML35-6	1.93E+00	9.84E-05	3.51E-03	0.00	1.19E+00	0.00	0.00	2.08E-05	0.00	2.59E-07
MTACQRF35-6	1.94E+00	1.03E-04	3.51E-03	0.00	1.19E+00	0.00	0.00	2.17E-05	0.00	2.70E-07
MTACRF45-15	5.94E-01	4.71E-05	1.05E-03	0.00	1.19E+00	0.00	0.00	9.94E-06	0.00	1.24E-07
MTDCRF35-3	3.29E+00	1.36E-04	6.01E-03	0.00	1.19E+00	0.00	0.00	2.88E-05	0.00	3.58E-07
MTDCRF45-10	3.23E+00	2.48E-04	5.63E-03	0.00	1.19E+00	0.00	0.00	5.23E-05	0.00	6.52E-07
MTDCRF-CL-0.6-50	8.71E+00	4.73E-05	1.69E-02	0.00	1.19E+00	0.00	0.00	9.99E-06	0.00	1.24E-07
MTDCRFQ45-3	3.46E+00	2.65E-04	6.01E-03	0.00	1.19E+00	0.00	0.00	5.60E-05	0.00	6.98E-07
				0.00						
	SFP (kg O3-eq)									
MT01-1035-069001	1.41E+00	5.63E-03	2.37E-03	0.00	3.22E-02	0.00	0.00	1.19E-03	0.00	1.05E-04
MT01-1045-069001	3.94E+00	1.59E-02	3.79E-03	0.00	6.08E-02	0.00	0.00	3.35E-03	0.00	2.95E-04
MT01-1135-069002	7.04E-01	2.81E-03	1.72E-03	0.00	5.17E-02	0.00	0.00	5.93E-04	0.00	5.22E-05
MT01-1145-069002	1.37E+00	5.51E-03	1.63E-03	0.00	6.08E-02	0.00	0.00	1.16E-03	0.00	1.03E-04
MT01-1145-069003	5.62E-01	2.25E-03	7.21E-04	0.00	1.05E-01	0.00	0.00	4.75E-04	0.00	4.19E-05
MT01-1145-069017	4.30E-01	1.72E-03	5.34E-04	0.00	1.46E-01	0.00	0.00	3.63E-04	0.00	3.20E-05
MT01-1145-069018	6.40E-01	2.57E-03	8.84E-04	0.00	9.73E-02	0.00	0.00	5.43E-04	0.00	4.79E-05
MT01-1225-069002	1.22E+00	4.39E-03	1.55E-02	0.00	4.05E-03	0.00	0.00	9.27E-04	0.00	8.17E-05
MT01-1225-069005	8.66E-01	3.13E-03	1.11E-02	0.00	4.05E-03	0.00	0.00	6.60E-04	0.00	5.82E-05
MT01-1228-069002	1.50E+00	5.78E-03	8.54E-03	0.00	4.05E-03	0.00	0.00	1.22E-03	0.00	1.08E-04
MT01-1235-069001	7.45E-01	2.83E-03	2.84E-03	0.00	4.05E-03	0.00	0.00	5.97E-04	0.00	5.26E-05
MT01-1245-069002	1.82E+00	7.33E-03	2.84E-03	0.00	4.05E-03	0.00	0.00	1.55E-03	0.00	1.36E-04
MT01-1325-069028-CT	3.46E+00	1.32E-02	2.43E-02	0.00	4.05E-03	0.00	0.00	2.78E-03	0.00	2.45E-04
MT01-1325-069029-CT	1.42E+00	5.38E-03	1.11E-02	0.00	4.05E-03	0.00	0.00	1.13E-03	0.00	1.00E-04
MT01-1325-069037-CT	2.24E+00	8.47E-03	1.75E-02	0.00	4.05E-03	0.00	0.00	1.79E-03	0.00	1.58E-04
MT01-1328-069008-CT	1.70E+00	6.68E-03	6.10E-03	0.00	4.05E-03	0.00	0.00	1.41E-03	0.00	1.24E-04
MT01-1335-069001	2.39E+00	9.52E-03	5.70E-03	0.00	4.05E-03	0.00	0.00	2.01E-03	0.00	1.77E-04
MT01-1335-069002	1.02E+00	4.05E-03	2.84E-03	0.00	4.05E-03	0.00	0.00	8.54E-04	0.00	7.53E-05
MT01-1345-069001	4.42E+00	1.77E-02	5.70E-03	0.00	4.05E-03	0.00	0.00	3.75E-03	0.00	3.30E-04
MT01-1345-069002	3.04E+00	1.22E-02	3.79E-03	0.00	4.05E-03	0.00	0.00	2.58E-03	0.00	2.27E-04
MT01-1345-069003	2.22E+00	8.93E-03	2.84E-03	0.00	4.05E-03	0.00	0.00	1.89E-03	0.00	1.66E-04
MT01-1345-069004	1.89E+00	7.61E-03	2.40E-03	0.00	4.05E-03	0.00	0.00	1.61E-03	0.00	1.42E-04
MT01-2101-069002	5.71E-01	2.22E-03	2.37E-03	0.00	4.05E-03	0.00	0.00	4.69E-04	0.00	4.13E-05

MT01-3001-069001	6.10E-01	2.14E-03	9.49E-03	0.00	4.05E-03	0.00	0.00	4.53E-04	0.00	3.99E-05
MT01-3101-067004	7.73E-01	2.84E-03	8.38E-03	0.00	4.05E-03	0.00	0.00	5.99E-04	0.00	5.28E-05
MTAC45-20-M	4.24E-01	1.70E-03	5.34E-04	0.00	4.05E-03	0.00	0.00	3.59E-04	0.00	3.16E-05
MTACML35-6	8.08E-01	3.21E-03	1.72E-03	0.00	4.05E-03	0.00	0.00	6.79E-04	0.00	5.98E-05
MTACQ45-10-M	1.41E+00	5.69E-03	1.63E-03	0.00	4.05E-03	0.00	0.00	1.20E-03	0.00	1.06E-04
MTACQML35-6	9.44E-01	3.75E-03	2.37E-03	0.00	4.05E-03	0.00	0.00	7.91E-04	0.00	6.98E-05
MTACQRF35-6	9.85E-01	3.91E-03	2.37E-03	0.00	4.05E-03	0.00	0.00	8.25E-04	0.00	7.28E-05
MTACRF45-15	4.44E-01	1.79E-03	7.21E-04	0.00	4.05E-03	0.00	0.00	3.79E-04	0.00	3.34E-05
MTDCRF35-3	1.31E+00	5.19E-03	4.07E-03	0.00	4.05E-03	0.00	0.00	1.09E-03	0.00	9.65E-05
MTDCRF45-10	2.35E+00	9.43E-03	3.79E-03	0.00	4.05E-03	0.00	0.00	1.99E-03	0.00	1.76E-04
MTDCRF-CL-0.6-50	5.42E-01	1.80E-03	1.14E-02	0.00	4.05E-03	0.00	0.00	3.80E-04	0.00	3.35E-05
MTDCRFQ45-3	2.52E+00	1.01E-02	4.07E-03	0.00	4.05E-03	0.00	0.00	2.13E-03	0.00	1.88E-04
	ADPfossil (MJ)									
MT01-1035-069001	1.80E+02	2.12E+00	3.00E-02	0.00	2.34E+01	0.00	0.00	4.48E-01	0.00	5.14E-03
MT01-1045-069001	4.98E+02	5.99E+00	4.81E-02	0.00	4.43E+01	0.00	0.00	1.26E+00	0.00	1.45E-02
MT01-1135-069002	9.18E+01	1.06E+00	2.19E-02	0.00	3.76E+01	0.00	0.00	2.24E-01	0.00	2.57E-03
MT01-1145-069002	1.74E+02	2.08E+00	2.07E-02	0.00	4.43E+01	0.00	0.00	4.39E-01	0.00	5.03E-03
MT01-1145-069003	7.14E+01	8.49E-01	9.04E-03	0.00	7.66E+01	0.00	0.00	1.79E-01	0.00	2.06E-03
MT01-1145-069017	5.45E+01	6.49E-01	6.66E-03	0.00	1.06E+02	0.00	0.00	1.37E-01	0.00	1.57E-03
MT01-1145-069018	8.14E+01	9.71E-01	1.12E-02	0.00	7.08E+01	0.00	0.00	2.05E-01	0.00	2.35E-03
MT01-1225-069002	1.89E+02	1.66E+00	1.96E-01	0.00	2.95E+00	0.00	0.00	3.50E-01	0.00	4.01E-03
MT01-1225-069005	1.34E+02	1.18E+00	1.40E-01	0.00	2.95E+00	0.00	0.00	2.49E-01	0.00	2.86E-03
MT01-1228-069002	2.06E+02	2.18E+00	1.08E-01	0.00	2.95E+00	0.00	0.00	4.61E-01	0.00	5.29E-03
MT01-1235-069001	9.81E+01	1.07E+00	3.59E-02	0.00	2.95E+00	0.00	0.00	2.25E-01	0.00	2.58E-03
MT01-1245-069002	2.33E+02	2.76E+00	3.59E-02	0.00	2.95E+00	0.00	0.00	5.84E-01	0.00	6.70E-03
MT01-1325-069028-CT	4.88E+02	4.98E+00	3.07E-01	0.00	2.95E+00	0.00	0.00	1.05E+00	0.00	1.21E-02
MT01-1325-069029-CT	2.03E+02	2.03E+00	1.40E-01	0.00	2.95E+00	0.00	0.00	4.28E-01	0.00	4.91E-03
MT01-1325-069037-CT	3.20E+02	3.20E+00	2.21E-01	0.00	2.95E+00	0.00	0.00	6.75E-01	0.00	7.74E-03
MT01-1328-069008-CT	2.26E+02	2.52E+00	7.71E-02	0.00	2.95E+00	0.00	0.00	5.33E-01	0.00	6.11E-03
MT01-1335-069001	3.11E+02	3.59E+00	7.21E-02	0.00	2.95E+00	0.00	0.00	7.58E-01	0.00	8.70E-03
MT01-1335-069002	1.33E+02	1.53E+00	3.59E-02	0.00	2.95E+00	0.00	0.00	3.22E-01	0.00	3.70E-03
MT01-1345-069001	5.62E+02	6.70E+00	7.21E-02	0.00	2.95E+00	0.00	0.00	1.41E+00	0.00	1.62E-02
MT01-1345-069002	3.87E+02	4.61E+00	4.81E-02	0.00	2.95E+00	0.00	0.00	9.73E-01	0.00	1.12E-02
MT01-1345-069003	2.82E+02	3.37E+00	3.59E-02	0.00	2.95E+00	0.00	0.00	7.12E-01	0.00	8.16E-03
MT01-1345-069004	2.41E+02	2.87E+00	3.02E-02	0.00	2.95E+00	0.00	0.00	6.06E-01	0.00	6.95E-03
MT01-2101-069002	7.67E+01	8.38E-01	3.00E-02	0.00	2.95E+00	0.00	0.00	1.77E-01	0.00	2.03E-03
MT01-3001-069001	9.84E+01	8.09E-01	1.20E-01	0.00	2.95E+00	0.00	0.00	1.71E-01	0.00	1.96E-03
MT01-3101-067004	1.16E+02	1.07E+00	1.06E-01	0.00	2.95E+00	0.00	0.00	2.26E-01	0.00	2.59E-03
MTAC45-20-M	5.40E+01	6.42E-01	6.66E-03	0.00	2.95E+00	0.00	0.00	1.35E-01	0.00	1.55E-03
MTACML35-6	1.04E+02	1.21E+00	2.19E-02	0.00	2.95E+00	0.00	0.00	2.56E-01	0.00	2.94E-03
MTACQ45-10-M	1.79E+02	2.15E+00	2.07E-02	0.00	2.95E+00	0.00	0.00	4.54E-01	0.00	5.20E-03
MTACQML35-6	1.23E+02	1.41E+00	3.00E-02	0.00	2.95E+00	0.00	0.00	2.99E-01	0.00	3.43E-03
MTACQRF35-6	1.28E+02	1.48E+00	3.00E-02	0.00	2.95E+00	0.00	0.00	3.11E-01	0.00	3.57E-03
MTACRF45-15	5.68E+01	6.77E-01	9.04E-03	0.00	2.95E+00	0.00	0.00	1.43E-01	0.00	1.64E-03
MTDCRF35-3	1.73E+02	1.96E+00	5.14E-02	0.00	2.95E+00	0.00	0.00	4.13E-01	0.00	4.74E-03
MTDCRF45-10	3.01E+02	3.56E+00	4.81E-02	0.00	2.95E+00	0.00	0.00	7.51E-01	0.00	8.62E-03
MTDCRF-CL-0.6-50	9.42E+01	6.80E-01	1.44E-01	0.00	2.95E+00	0.00	0.00	1.44E-01	0.00	1.65E-03
MTDCRFQ45-3	3.23E+02	3.81E+00	5.14E-02	0.00	2.95E+00	0.00	0.00	8.04E-01	0.00	9.23E-03

[a]GWP100 did not include biogenic carbon removals and emissions (GWP-biogenic) and emissions from land use and land use change (GWP-LULUC).

b) Resource Inventory Metrics:

Indicator/LCI Metric	RPRE (MJ)									
Products		Life cycle stage								
	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4
MT01-1035-069001	1.99E+01	3.07E-02	3.00E-02	0.00	1.31E+00	0.00	0.00	6.48E-03	0.00	4.58E-05
MT01-1045-069001	5.57E+01	8.65E-02	4.81E-02	0.00	2.48E+00	0.00	0.00	1.83E-02	0.00	1.29E-04
MT01-1135-069002	1.00E+01	1.53E-02	2.19E-02	0.00	2.10E+00	0.00	0.00	3.23E-03	0.00	2.28E-05
MT01-1145-069002	1.94E+01	3.00E-02	2.07E-02	0.00	2.48E+00	0.00	0.00	6.34E-03	0.00	4.48E-05
MT01-1145-069003	7.96E+00	1.23E-02	9.04E-03	0.00	4.28E+00	0.00	0.00	2.59E-03	0.00	1.83E-05
MT01-1145-069017	6.07E+00	9.38E-03	6.66E-03	0.00	5.94E+00	0.00	0.00	1.98E-03	0.00	1.40E-05
MT01-1145-069018	9.04E+00	1.40E-02	1.12E-02	0.00	3.96E+00	0.00	0.00	2.96E-03	0.00	2.09E-05
MT01-1225-069002	1.82E+01	2.39E-02	1.97E-01	0.00	1.65E-01	0.00	0.00	5.05E-03	0.00	3.57E-05
MT01-1225-069005	1.29E+01	1.70E-02	1.40E-01	0.00	1.65E-01	0.00	0.00	3.60E-03	0.00	2.54E-05
MT01-1228-069002	2.16E+01	3.15E-02	1.08E-01	0.00	1.65E-01	0.00	0.00	6.66E-03	0.00	4.71E-05
MT01-1235-069001	1.07E+01	1.54E-02	3.59E-02	0.00	1.65E-01	0.00	0.00	3.25E-03	0.00	2.30E-05
MT01-1245-069002	2.58E+01	4.00E-02	3.59E-02	0.00	1.65E-01	0.00	0.00	8.43E-03	0.00	5.96E-05
MT01-1325-069028-CT	5.03E+01	7.19E-02	3.07E-01	0.00	1.65E-01	0.00	0.00	1.52E-02	0.00	1.07E-04
MT01-1325-069029-CT	2.07E+01	2.93E-02	1.40E-01	0.00	1.65E-01	0.00	0.00	6.19E-03	0.00	4.37E-05
MT01-1325-069037-CT	3.26E+01	4.62E-02	2.21E-01	0.00	1.65E-01	0.00	0.00	9.76E-03	0.00	6.89E-05
MT01-1328-069008-CT	2.43E+01	3.65E-02	7.71E-02	0.00	1.65E-01	0.00	0.00	7.70E-03	0.00	5.44E-05
MT01-1335-069001	3.41E+01	5.19E-02	7.21E-02	0.00	1.65E-01	0.00	0.00	1.10E-02	0.00	7.75E-05
MT01-1335-069002	1.45E+01	2.21E-02	3.59E-02	0.00	1.65E-01	0.00	0.00	4.66E-03	0.00	3.29E-05
MT01-1345-069001	6.25E+01	9.68E-02	7.21E-02	0.00	1.65E-01	0.00	0.00	2.04E-02	0.00	1.44E-04
MT01-1345-069002	4.30E+01	6.66E-02	4.81E-02	0.00	1.65E-01	0.00	0.00	1.41E-02	0.00	9.94E-05
MT01-1345-069003	3.14E+01	4.87E-02	3.59E-02	0.00	1.65E-01	0.00	0.00	1.03E-02	0.00	7.27E-05
MT01-1345-069004	2.68E+01	4.15E-02	3.02E-02	0.00	1.65E-01	0.00	0.00	8.76E-03	0.00	6.19E-05
MT01-2101-069002	8.20E+00	1.21E-02	3.00E-02	0.00	1.65E-01	0.00	0.00	2.56E-03	0.00	1.81E-05
MT01-3001-069001	9.18E+00	1.17E-02	1.20E-01	0.00	1.65E-01	0.00	0.00	2.47E-03	0.00	1.75E-05
MT01-3101-067004	1.14E+01	1.55E-02	1.06E-01	0.00	1.65E-01	0.00	0.00	3.27E-03	0.00	2.31E-05
MTAC45-20-M	6.01E+00	9.27E-03	6.66E-03	0.00	1.65E-01	0.00	0.00	1.96E-03	0.00	1.38E-05
MTACML35-6	1.15E+01	1.75E-02	2.19E-02	0.00	1.65E-01	0.00	0.00	3.70E-03	0.00	2.62E-05
MTACQ45-10-M	2.00E+01	3.11E-02	2.07E-02	0.00	1.65E-01	0.00	0.00	6.56E-03	0.00	4.63E-05
MTACQML35-6	1.34E+01	2.04E-02	3.00E-02	0.00	1.65E-01	0.00	0.00	4.31E-03	0.00	3.05E-05
MTACQRF35-6	1.40E+01	2.13E-02	3.00E-02	0.00	1.65E-01	0.00	0.00	4.50E-03	0.00	3.18E-05
MTACRF45-15	6.28E+00	9.78E-03	9.04E-03	0.00	1.65E-01	0.00	0.00	2.06E-03	0.00	1.46E-05
MTDCRF35-3	1.87E+01	2.83E-02	5.14E-02	0.00	1.65E-01	0.00	0.00	5.97E-03	0.00	4.22E-05
MTDCRF45-10	3.33E+01	5.14E-02	4.81E-02	0.00	1.65E-01	0.00	0.00	1.09E-02	0.00	7.67E-05
MTDCRF-CL-0.6-50	8.33E+00	9.82E-03	1.44E-01	0.00	1.65E-01	0.00	0.00	2.07E-03	0.00	1.47E-05
MTDCRFQ45-3	3.57E+01	5.51E-02	5.14E-02	0.00	1.65E-01	0.00	0.00	1.16E-02	0.00	8.22E-05

	RPRM (MJ)									
MT01-1035-069001	1.30E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1045-069001	2.08E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1135-069002	9.46E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069002	8.95E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069003	3.96E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069017	2.94E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069018	4.86E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069002	8.54E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069005	6.08E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1228-069002	4.69E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1235-069001	1.56E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1245-069002	1.56E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069028-CT	1.34E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069029-CT	6.08E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069037-CT	9.59E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1328-069008-CT	3.35E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069001	3.13E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069002	1.56E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069001	3.13E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069002	2.08E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069003	1.56E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069004	1.32E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-2101-069002	1.30E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3001-069001	5.22E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3101-067004	4.60E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTAC45-20-M	2.94E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACML35-6	9.46E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQ45-10-M	8.95E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQML35-6	1.30E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQRF35-6	1.30E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACRF45-15	3.96E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF35-3	2.24E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF45-10	2.08E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF-CL-0.6-50	6.25E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRFQ45-3	2.24E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NRPRE (MJ)									
MT01-1035-069001	1.72E+02	2.12E+00	6.93E-02	0.00	2.34E+01	0.00	0.00	4.48E-01	0.00	5.14E-03
MT01-1045-069001	4.76E+02	5.99E+00	1.07E-01	0.00	4.43E+01	0.00	0.00	1.26E+00	0.00	1.45E-02
MT01-1135-069002	8.74E+01	1.06E+00	4.80E-02	0.00	3.76E+01	0.00	0.00	2.24E-01	0.00	2.57E-03
MT01-1145-069002	1.66E+02	2.08E+00	4.80E-02	0.00	4.43E+01	0.00	0.00	4.39E-01	0.00	5.03E-03
MT01-1145-069003	6.82E+01	8.49E-01	2.13E-02	0.00	7.66E+01	0.00	0.00	1.79E-01	0.00	2.06E-03
MT01-1145-069017	5.20E+01	6.49E-01	1.60E-02	0.00	1.06E+02	0.00	0.00	1.37E-01	0.00	1.57E-03
MT01-1145-069018	7.77E+01	9.71E-01	2.67E-02	0.00	7.08E+01	0.00	0.00	2.05E-01	0.00	2.35E-03
MT01-1225-069002	1.76E+02	1.66E+00	4.42E-01	0.00	2.95E+00	0.00	0.00	3.50E-01	0.00	4.01E-03
MT01-1225-069005	1.25E+02	1.18E+00	3.14E-01	0.00	2.95E+00	0.00	0.00	2.49E-01	0.00	2.86E-03
MT01-1228-069002	1.95E+02	2.18E+00	2.40E-01	0.00	2.95E+00	0.00	0.00	4.61E-01	0.00	5.29E-03
MT01-1235-069001	9.30E+01	1.07E+00	8.00E-02	0.00	2.95E+00	0.00	0.00	2.25E-01	0.00	2.58E-03
MT01-1245-069002	2.22E+02	2.76E+00	8.00E-02	0.00	2.95E+00	0.00	0.00	5.84E-01	0.00	6.70E-03

MT01-1325-069028-CT	4.60E+02	4.98E+00	6.88E-01	0.00	2.95E+00	0.00	0.00	1.05E+00	0.00	1.21E-02
MT01-1325-069029-CT	1.91E+02	2.03E+00	3.14E-01	0.00	2.95E+00	0.00	0.00	4.28E-01	0.00	4.91E-03
MT01-1325-069037-CT	3.01E+02	3.20E+00	4.96E-01	0.00	2.95E+00	0.00	0.00	6.75E-01	0.00	7.74E-03
MT01-1328-069008-CT	2.15E+02	2.52E+00	1.71E-01	0.00	2.95E+00	0.00	0.00	5.33E-01	0.00	6.11E-03
MT01-1335-069001	2.96E+02	3.59E+00	1.60E-01	0.00	2.95E+00	0.00	0.00	7.58E-01	0.00	8.70E-03
MT01-1335-069002	1.27E+02	1.53E+00	8.00E-02	0.00	2.95E+00	0.00	0.00	3.22E-01	0.00	3.70E-03
MT01-1345-069001	5.37E+02	6.70E+00	1.60E-01	0.00	2.95E+00	0.00	0.00	1.41E+00	0.00	1.62E-02
MT01-1345-069002	3.69E+02	4.61E+00	1.07E-01	0.00	2.95E+00	0.00	0.00	9.73E-01	0.00	1.12E-02
MT01-1345-069003	2.70E+02	3.37E+00	8.00E-02	0.00	2.95E+00	0.00	0.00	7.12E-01	0.00	8.16E-03
MT01-1345-069004	2.30E+02	2.87E+00	6.93E-02	0.00	2.95E+00	0.00	0.00	6.06E-01	0.00	6.95E-03
MT01-2101-069002	7.27E+01	8.38E-01	6.93E-02	0.00	2.95E+00	0.00	0.00	1.77E-01	0.00	2.03E-03
MT01-3001-069001	9.15E+01	8.09E-01	2.67E-01	0.00	2.95E+00	0.00	0.00	1.71E-01	0.00	1.96E-03
MT01-3101-067004	1.09E+02	1.07E+00	2.35E-01	0.00	2.95E+00	0.00	0.00	2.26E-01	0.00	2.59E-03
MTAC45-20-M	5.16E+01	6.42E-01	1.60E-02	0.00	2.95E+00	0.00	0.00	1.35E-01	0.00	1.55E-03
MTACML35-6	9.93E+01	1.21E+00	4.80E-02	0.00	2.95E+00	0.00	0.00	2.56E-01	0.00	2.94E-03
MTACQ45-10-M	1.71E+02	2.15E+00	4.80E-02	0.00	2.95E+00	0.00	0.00	4.54E-01	0.00	5.20E-03
MTACQML35-6	1.17E+02	1.41E+00	6.93E-02	0.00	2.95E+00	0.00	0.00	2.99E-01	0.00	3.43E-03
MTACQRF35-6	1.22E+02	1.48E+00	6.93E-02	0.00	2.95E+00	0.00	0.00	3.11E-01	0.00	3.57E-03
MTACRF45-15	5.42E+01	6.77E-01	2.13E-02	0.00	2.95E+00	0.00	0.00	1.43E-01	0.00	1.64E-03
MTDCRF35-3	1.64E+02	1.96E+00	1.17E-01	0.00	2.95E+00	0.00	0.00	4.13E-01	0.00	4.74E-03
MTDCRF45-10	2.87E+02	3.56E+00	1.07E-01	0.00	2.95E+00	0.00	0.00	7.51E-01	0.00	8.62E-03
MTDCRF-CL-0.6-50	8.70E+01	6.80E-01	3.25E-01	0.00	2.95E+00	0.00	0.00	1.44E-01	0.00	1.65E-03
MTDCRFQ45-3	3.08E+02	3.81E+00	1.17E-01	0.00	2.95E+00	0.00	0.00	8.04E-01	0.00	9.23E-03
	NRPRM (MJ)									
MT01-1035-069001	8.39E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1045-069001	2.24E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1135-069002	4.44E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069002	7.94E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069003	3.25E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069017	2.46E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069018	3.74E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069002	1.25E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069005	8.96E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1228-069002	1.13E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1235-069001	5.10E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1245-069002	1.08E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069028-CT	2.79E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069029-CT	1.19E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069037-CT	1.87E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1328-069008-CT	1.14E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069001	1.50E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069002	6.53E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069001	2.57E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069002	1.76E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069003	1.29E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069004	1.10E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-2101-069002	3.95E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3001-069001	6.92E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3101-067004	7.35E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

MTAC45-20-M	2.46E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACML35-6	4.97E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQ45-10-M	8.18E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQML35-6	5.94E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQRF35-6	6.16E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACRF45-15	2.63E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF35-3	8.54E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF45-10	1.40E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF-CL-0.6-50	7.32E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRFQ45-3	1.50E+01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SM (kg)									
MT01-1035-069001	4.23E-01	9.07E-04	1.37E-05	0.00	0.00	0.00	0.00	1.92E-04	0.00	0.00
MT01-1045-069001	1.10E+00	2.56E-03	2.19E-05	0.00	0.00	0.00	0.00	5.40E-04	0.00	0.00
MT01-1135-069002	2.28E-01	4.53E-04	9.92E-06	0.00	0.00	0.00	0.00	9.56E-05	0.00	0.00
MT01-1145-069002	3.91E-01	8.89E-04	9.38E-06	0.00	0.00	0.00	0.00	1.88E-04	0.00	0.00
MT01-1145-069003	1.61E-01	3.63E-04	4.16E-06	0.00	0.00	0.00	0.00	7.66E-05	0.00	0.00
MT01-1145-069017	1.23E-01	2.77E-04	3.08E-06	0.00	0.00	0.00	0.00	5.86E-05	0.00	0.00
MT01-1145-069018	1.87E-01	4.15E-04	5.09E-06	0.00	0.00	0.00	0.00	8.76E-05	0.00	0.00
MT01-1225-069002	7.78E-01	7.08E-04	8.95E-05	0.00	0.00	0.00	0.00	1.49E-04	0.00	0.00
MT01-1225-069005	5.54E-01	5.04E-04	6.38E-05	0.00	0.00	0.00	0.00	1.06E-04	0.00	0.00
MT01-1228-069002	6.34E-01	9.33E-04	4.92E-05	0.00	0.00	0.00	0.00	1.97E-04	0.00	0.00
MT01-1235-069001	2.71E-01	4.56E-04	1.64E-05	0.00	0.00	0.00	0.00	9.63E-05	0.00	0.00
MT01-1245-069002	5.42E-01	1.18E-03	1.64E-05	0.00	0.00	0.00	0.00	2.49E-04	0.00	0.00
MT01-1325-069028-CT	1.60E+00	2.13E-03	1.40E-04	0.00	0.00	0.00	0.00	4.49E-04	0.00	0.00
MT01-1325-069029-CT	6.92E-01	8.67E-04	6.38E-05	0.00	0.00	0.00	0.00	1.83E-04	0.00	0.00
MT01-1325-069037-CT	1.09E+00	1.37E-03	1.01E-04	0.00	0.00	0.00	0.00	2.89E-04	0.00	0.00
MT01-1328-069008-CT	6.09E-01	1.08E-03	3.51E-05	0.00	0.00	0.00	0.00	2.28E-04	0.00	0.00
MT01-1335-069001	7.70E-01	1.54E-03	3.28E-05	0.00	0.00	0.00	0.00	3.24E-04	0.00	0.00
MT01-1335-069002	3.41E-01	6.53E-04	1.64E-05	0.00	0.00	0.00	0.00	1.38E-04	0.00	0.00
MT01-1345-069001	1.27E+00	2.86E-03	3.28E-05	0.00	0.00	0.00	0.00	6.04E-04	0.00	0.00
MT01-1345-069002	8.73E-01	1.97E-03	2.19E-05	0.00	0.00	0.00	0.00	4.16E-04	0.00	0.00
MT01-1345-069003	6.40E-01	1.44E-03	1.64E-05	0.00	0.00	0.00	0.00	3.04E-04	0.00	0.00
MT01-1345-069004	5.45E-01	1.23E-03	1.38E-05	0.00	0.00	0.00	0.00	2.59E-04	0.00	0.00
MT01-2101-069002	2.14E-01	3.58E-04	1.37E-05	0.00	0.00	0.00	0.00	7.56E-05	0.00	0.00
MT01-3001-069001	4.42E-01	3.46E-04	5.47E-05	0.00	0.00	0.00	0.00	7.30E-05	0.00	0.00
MT01-3101-067004	4.48E-01	4.58E-04	4.83E-05	0.00	0.00	0.00	0.00	9.67E-05	0.00	0.00
MTAC45-20-M	1.22E-01	2.74E-04	3.08E-06	0.00	0.00	0.00	0.00	5.79E-05	0.00	0.00
MTACML35-6	2.53E-01	5.19E-04	9.92E-06	0.00	0.00	0.00	0.00	1.09E-04	0.00	0.00
MTACQ45-10-M	4.02E-01	9.18E-04	9.38E-06	0.00	0.00	0.00	0.00	1.94E-04	0.00	0.00
MTACQML35-6	3.07E-01	6.05E-04	1.37E-05	0.00	0.00	0.00	0.00	1.28E-04	0.00	0.00
MTACQRF35-6	3.18E-01	6.31E-04	1.37E-05	0.00	0.00	0.00	0.00	1.33E-04	0.00	0.00
MTACRF45-15	1.33E-01	2.89E-04	4.16E-06	0.00	0.00	0.00	0.00	6.11E-05	0.00	0.00
MTDCRF35-3	4.51E-01	8.36E-04	2.35E-05	0.00	0.00	0.00	0.00	1.77E-04	0.00	0.00
MTDCRF45-10	7.02E-01	1.52E-03	2.19E-05	0.00	0.00	0.00	0.00	3.21E-04	0.00	0.00
MTDCRF-CL-0.6-50	4.83E-01	2.91E-04	6.56E-05	0.00	0.00	0.00	0.00	6.13E-05	0.00	0.00
MTDCRFQ45-3	7.52E-01	1.63E-03	2.35E-05	0.00	0.00	0.00	0.00	3.44E-04	0.00	0.00
	RSF (MJ)									
MT01-1035-069001	1.73E-02	1.09E-05	2.16E-07	0.00	6.52E-06	0.00	0.00	2.30E-06	0.00	5.65E-09

MT01-1045-069001	3.43E-02	3.07E-05	3.46E-07	0.00	1.23E-05	0.00	0.00	6.48E-06	0.00	1.59E-08
MT01-1135-069002	1.14E-02	5.43E-06	1.58E-07	0.00	1.04E-05	0.00	0.00	1.15E-06	0.00	2.82E-09
MT01-1145-069002	1.35E-02	1.07E-05	1.49E-07	0.00	1.23E-05	0.00	0.00	2.25E-06	0.00	5.53E-09
MT01-1145-069003	5.78E-03	4.35E-06	6.52E-08	0.00	2.13E-05	0.00	0.00	9.19E-07	0.00	2.26E-09
MT01-1145-069017	4.33E-03	3.33E-06	4.80E-08	0.00	2.95E-05	0.00	0.00	7.03E-07	0.00	1.73E-09
MT01-1145-069018	6.91E-03	4.98E-06	8.06E-08	0.00	1.97E-05	0.00	0.00	1.05E-06	0.00	2.58E-09
MT01-1225-069002	8.25E-02	8.50E-06	1.42E-06	0.00	8.20E-07	0.00	0.00	1.79E-06	0.00	4.41E-09
MT01-1225-069005	5.88E-02	6.05E-06	1.01E-06	0.00	8.20E-07	0.00	0.00	1.28E-06	0.00	3.14E-09
MT01-1228-069002	4.85E-02	1.12E-05	7.78E-07	0.00	8.20E-07	0.00	0.00	2.36E-06	0.00	5.81E-09
MT01-1235-069001	1.71E-02	5.47E-06	2.59E-07	0.00	8.20E-07	0.00	0.00	1.16E-06	0.00	2.84E-09
MT01-1245-069002	2.13E-02	1.42E-05	2.59E-07	0.00	8.20E-07	0.00	0.00	2.99E-06	0.00	7.36E-09
MT01-1325-069028-CT	1.35E-01	2.55E-05	2.21E-06	0.00	8.20E-07	0.00	0.00	5.39E-06	0.00	1.32E-08
MT01-1325-069029-CT	6.09E-02	1.04E-05	1.01E-06	0.00	8.20E-07	0.00	0.00	2.20E-06	0.00	5.40E-09
MT01-1325-069037-CT	9.60E-02	1.64E-05	1.59E-06	0.00	8.20E-07	0.00	0.00	3.46E-06	0.00	8.51E-09
MT01-1328-069008-CT	3.71E-02	1.29E-05	5.55E-07	0.00	8.20E-07	0.00	0.00	2.73E-06	0.00	6.71E-09
MT01-1335-069001	3.78E-02	1.84E-05	5.19E-07	0.00	8.20E-07	0.00	0.00	3.89E-06	0.00	9.56E-09
MT01-1335-069002	1.82E-02	7.83E-06	2.59E-07	0.00	8.20E-07	0.00	0.00	1.65E-06	0.00	4.06E-09
MT01-1345-069001	4.57E-02	3.44E-05	5.19E-07	0.00	8.20E-07	0.00	0.00	7.25E-06	0.00	1.78E-08
MT01-1345-069002	3.08E-02	2.36E-05	3.46E-07	0.00	8.20E-07	0.00	0.00	4.99E-06	0.00	1.23E-08
MT01-1345-069003	2.29E-02	1.73E-05	2.59E-07	0.00	8.20E-07	0.00	0.00	3.65E-06	0.00	8.97E-09
MT01-1345-069004	1.93E-02	1.47E-05	2.18E-07	0.00	8.20E-07	0.00	0.00	3.11E-06	0.00	7.64E-09
MT01-2101-069002	1.41E-02	4.30E-06	2.16E-07	0.00	8.20E-07	0.00	0.00	9.08E-07	0.00	2.23E-09
MT01-3001-069001	4.98E-02	4.15E-06	8.64E-07	0.00	8.20E-07	0.00	0.00	8.76E-07	0.00	2.15E-09
MT01-3101-067004	4.49E-02	5.50E-06	7.63E-07	0.00	8.20E-07	0.00	0.00	1.16E-06	0.00	2.85E-09
MTAC45-20-M	4.32E-03	3.29E-06	4.80E-08	0.00	8.20E-07	0.00	0.00	6.95E-07	0.00	1.71E-09
MTACML35-6	1.18E-02	6.22E-06	1.58E-07	0.00	8.20E-07	0.00	0.00	1.31E-06	0.00	3.23E-09
MTACQ45-10-M	1.37E-02	1.10E-05	1.49E-07	0.00	8.20E-07	0.00	0.00	2.33E-06	0.00	5.72E-09
MTACQML35-6	1.55E-02	7.25E-06	2.16E-07	0.00	8.20E-07	0.00	0.00	1.53E-06	0.00	3.76E-09
MTACQRF35-6	1.57E-02	7.57E-06	2.16E-07	0.00	8.20E-07	0.00	0.00	1.60E-06	0.00	3.93E-09
MTACRF45-15	5.33E-03	3.47E-06	6.52E-08	0.00	8.20E-07	0.00	0.00	7.33E-07	0.00	1.80E-09
MTDCRF35-3	2.55E-02	1.00E-05	3.70E-07	0.00	8.20E-07	0.00	0.00	2.12E-06	0.00	5.21E-09
MTDCRF45-10	2.81E-02	1.83E-05	3.46E-07	0.00	8.20E-07	0.00	0.00	3.85E-06	0.00	9.47E-09
MTDCRF-CL-0.6-50	5.90E-02	3.49E-06	1.04E-06	0.00	8.20E-07		0.00E+00	7.36E-07	0.00	1.81E-09
MTDCRFQ45-3	3.02E-02	1.95E-05	3.70E-07	0.00	8.20E-07		0.00E+00	4.13E-06	0.00	1.01E-08
	NRSF (MJ)									
MT01-1035-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1045-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1135-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1228-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1235-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1245-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069028-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

MT01-1325-069029-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069037-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1328-069008-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-2101-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3001-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3101-067004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTAC45-20-M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACML35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQ45-10-M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQML35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQRF35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACRF45-15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF35-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF45-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF-CL-0.6-50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRFQ45-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FW (m3)									
MT01-1035-069001	1.06E-01	2.76E-04	1.75E-05	0.00E+00	5.90E-03	0.00	0.00	5.82E-05	0.00	3.52E-07
MT01-1045-069001	2.95E-01	7.77E-04	2.80E-05	0.00E+00	1.11E-02	0.00	0.00	1.64E-04	0.00	9.92E-07
MT01-1135-069002	5.36E-02	1.38E-04	1.27E-05	0.00E+00	9.46E-03	0.00	0.00	2.90E-05	0.00	1.76E-07
MT01-1145-069002	1.03E-01	2.70E-04	1.20E-05	0.00E+00	1.11E-02	0.00	0.00	5.70E-05	0.00	3.44E-07
MT01-1145-069003	4.23E-02	1.10E-04	5.32E-06	0.00E+00	1.93E-02	0.00	0.00	2.33E-05	0.00	1.41E-07
MT01-1145-069017	3.22E-02	8.43E-05	3.95E-06	0.00	2.67E-02	0.00	0.00	1.78E-05	0.00	1.08E-07
MT01-1145-069018	4.80E-02	1.26E-04	6.52E-06	0.00	1.78E-02	0.00	0.00	2.66E-05	0.00	1.61E-07
MT01-1225-069002	1.02E-01	2.15E-04	1.15E-04	0.00	7.42E-04	0.00	0.00	4.54E-05	0.00	2.74E-07
MT01-1225-069005	7.24E-02	1.53E-04	8.17E-05	0.00	7.42E-04	0.00	0.00	3.23E-05	0.00	1.95E-07
MT01-1228-069002	1.17E-01	2.83E-04	6.30E-05	0.00	7.42E-04	0.00	0.00	5.98E-05	0.00	3.62E-07
MT01-1235-069001	5.85E-02	1.39E-04	2.09E-05	0.00	7.42E-04	0.00	0.00	2.92E-05	0.00	1.77E-07
MT01-1245-069002	1.37E-01	3.59E-04	2.09E-05	0.00	7.42E-04	0.00	0.00	7.58E-05	0.00	4.58E-07
MT01-1325-069028-CT	2.75E-01	6.46E-04	1.79E-04	0.00	7.42E-04	0.00	0.00	1.36E-04	0.00	8.24E-07
MT01-1325-069029-CT	1.13E-01	2.63E-04	8.17E-05	0.00	7.42E-04	0.00	0.00	5.56E-05	0.00	3.36E-07
MT01-1325-069037-CT	1.79E-01	4.15E-04	1.29E-04	0.00	7.42E-04	0.00	0.00	8.77E-05	0.00	5.30E-07
MT01-1328-069008-CT	1.31E-01	3.28E-04	4.50E-05	0.00	7.42E-04	0.00	0.00	6.91E-05	0.00	4.18E-07
MT01-1335-069001	1.82E-01	4.66E-04	4.20E-05	0.00	7.42E-04	0.00	0.00	9.85E-05	0.00	5.95E-07
MT01-1335-069002	7.77E-02	1.98E-04	2.09E-05	0.00	7.42E-04	0.00	0.00	4.19E-05	0.00	2.53E-07
MT01-1345-069001	3.32E-01	8.70E-04	4.20E-05	0.00	7.42E-04	0.00	0.00	1.84E-04	0.00	1.11E-06
MT01-1345-069002	2.28E-01	5.99E-04	2.80E-05	0.00	7.42E-04	0.00	0.00	1.26E-04	0.00	7.64E-07
MT01-1345-069003	1.67E-01	4.38E-04	2.09E-05	0.00	7.42E-04	0.00	0.00	9.24E-05	0.00	5.59E-07
MT01-1345-069004	1.42E-01	3.73E-04	1.77E-05	0.00	7.42E-04	0.00	0.00	7.87E-05	0.00	4.76E-07

MT01-2101-069002	4.43E-02	1.09E-04	1.75E-05	0.00	7.42E-04	0.00	0.00	2.30E-05	0.00	1.39E-07
MT01-3001-069001	5.21E-02	1.05E-04	7.00E-05	0.00	7.42E-04	0.00	0.00	2.22E-05	0.00	1.34E-07
MT01-3101-067004	6.35E-02	1.39E-04	6.18E-05	0.00	7.42E-04	0.00	0.00	2.94E-05	0.00	1.78E-07
MTAC45-20-M	3.19E-02	8.33E-05	3.95E-06	0.00	7.42E-04	0.00	0.00	1.76E-05	0.00	1.06E-07
MTACML35-6	6.12E-02	1.58E-04	1.27E-05	0.00	7.42E-04	0.00	0.00	3.33E-05	0.00	2.01E-07
MTACQ45-10-M	1.06E-01	2.79E-04	1.20E-05	0.00	7.42E-04	0.00	0.00	5.89E-05	0.00	3.56E-07
MTACQML35-6	7.17E-02	1.84E-04	1.75E-05	0.00	7.42E-04	0.00	0.00	3.88E-05	0.00	2.34E-07
MTACQRF35-6	7.48E-02	1.92E-04	1.75E-05	0.00	7.42E-04	0.00	0.00	4.04E-05	0.00	2.44E-07
MTACRF45-15	3.34E-02	8.79E-05	5.32E-06	0.00	7.42E-04	0.00	0.00	1.85E-05	0.00	1.12E-07
MTDCRF35-3	1.01E-01	2.54E-04	3.00E-05	0.00	7.42E-04	0.00	0.00	5.36E-05	0.00	3.24E-07
MTDCRF45-10	1.77E-01	4.62E-04	2.80E-05	0.00	7.42E-04	0.00	0.00	9.76E-05	0.00	5.90E-07
MTDCRF-CL-0.6-50	4.83E-02	8.83E-05	8.39E-05	0.00	7.42E-04	0.00	0.00	1.86E-05	0.00	1.13E-07
MTDCRFQ45-3	1.90E-01	4.95E-04	3.00E-05	0.00	7.42E-04	0.00	0.00	1.04E-04	0.00	6.31E-07

c) Waste/output Inventory Metrics:

Indicator/LCI Metric	**HWD (kg)**									
Products	**Life cycle stage**									
	A1-A3	**A4**	**A5**	**B1-B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**
MT01-1035-069001	2.50E+00	3.63E-03	2.77E-04	0.00	9.16E-02	0.00	0.00	7.66E-04	0.00	7.37E-06
MT01-1045-069001	7.01E+00	1.02E-02	4.43E-04	0.00	1.73E-01	0.00	0.00	2.16E-03	0.00	2.08E-05
MT01-1135-069002	1.25E+00	1.81E-03	2.01E-04	0.00	1.47E-01	0.00	0.00	3.82E-04	0.00	3.68E-06
MT01-1145-069002	2.44E+00	3.55E-03	1.90E-04	0.00	1.73E-01	0.00	0.00	7.50E-04	0.00	7.22E-06
MT01-1145-069003	9.97E-01	1.45E-03	8.42E-05	0.00	2.99E-01	0.00	0.00	3.06E-04	0.00	2.95E-06
MT01-1145-069017	7.63E-01	1.11E-03	6.25E-05	0.00	4.15E-01	0.00	0.00	2.34E-04	0.00	2.25E-06
MT01-1145-069018	1.14E+00	1.66E-03	1.03E-04	0.00	2.77E-01	0.00	0.00	3.50E-04	0.00	3.37E-06
MT01-1225-069002	2.13E+00	2.83E-03	1.81E-03	0.00	1.15E-02	0.00	0.00	5.98E-04	0.00	5.75E-06
MT01-1225-069005	1.51E+00	2.02E-03	1.29E-03	0.00	1.15E-02	0.00	0.00	4.26E-04	0.00	4.10E-06
MT01-1228-069002	2.65E+00	3.73E-03	9.97E-04	0.00	1.15E-02	0.00	0.00	7.87E-04	0.00	7.58E-06
MT01-1235-069001	1.31E+00	1.82E-03	3.31E-04	0.00	1.15E-02	0.00	0.00	3.85E-04	0.00	3.71E-06
MT01-1245-069002	3.24E+00	4.72E-03	3.31E-04	0.00	1.15E-02	0.00	0.00	9.97E-04	0.00	9.60E-06
MT01-1325-069028-CT	6.10E+00	8.50E-03	2.84E-03	0.00	1.15E-02	0.00	0.00	1.80E-03	0.00	1.73E-05
MT01-1325-069029-CT	2.50E+00	3.47E-03	1.29E-03	0.00	1.15E-02	0.00	0.00	7.32E-04	0.00	7.05E-06
MT01-1325-069037-CT	3.94E+00	5.46E-03	2.04E-03	0.00	1.15E-02	0.00	0.00	1.15E-03	0.00	1.11E-05
MT01-1328-069008-CT	3.01E+00	4.31E-03	7.12E-04	0.00	1.15E-02	0.00	0.00	9.10E-04	0.00	8.76E-06
MT01-1335-069001	4.25E+00	6.14E-03	6.65E-04	0.00	1.15E-02	0.00	0.00	1.30E-03	0.00	1.25E-05
MT01-1335-069002	1.81E+00	2.61E-03	3.31E-04	0.00	1.15E-02	0.00	0.00	5.51E-04	0.00	5.30E-06
MT01-1345-069001	7.86E+00	1.14E-02	6.65E-04	0.00	1.15E-02	0.00	0.00	2.42E-03	0.00	2.33E-05
MT01-1345-069002	5.41E+00	7.88E-03	4.43E-04	0.00	1.15E-02	0.00	0.00	1.66E-03	0.00	1.60E-05
MT01-1345-069003	3.95E+00	5.76E-03	3.31E-04	0.00	1.15E-02	0.00	0.00	1.22E-03	0.00	1.17E-05
MT01-1345-069004	3.37E+00	4.91E-03	2.80E-04	0.00	1.15E-02	0.00	0.00	1.04E-03	0.00	9.97E-06
MT01-2101-069002	1.01E+00	1.43E-03	2.77E-04	0.00	1.15E-02	0.00	0.00	3.02E-04	0.00	2.91E-06
MT01-3001-069001	1.06E+00	1.38E-03	1.11E-03	0.00	1.15E-02	0.00	0.00	2.92E-04	0.00	2.81E-06
MT01-3101-067004	1.35E+00	1.83E-03	9.78E-04	0.00	1.15E-02	0.00	0.00	3.87E-04	0.00	3.72E-06
MTAC45-20-M	7.54E-01	1.10E-03	6.25E-05	0.00	1.15E-02	0.00	0.00	2.31E-04	0.00	2.23E-06
MTACML35-6	1.43E+00	2.07E-03	2.01E-04	0.00	1.15E-02	0.00	0.00	4.38E-04	0.00	4.21E-06
MTACQ45-10-M	2.51E+00	3.67E-03	1.90E-04	0.00	1.15E-02	0.00	0.00	7.75E-04	0.00	7.46E-06

MTACQML35-6	1.68E+00	2.42E-03	2.77E-04	0.00	1.15E-02	0.00	0.00	5.10E-04	0.00	4.91E-06
MTACQRF35-6	1.75E+00	2.52E-03	2.77E-04	0.00	1.15E-02	0.00	0.00	5.32E-04	0.00	5.12E-06
MTACRF45-15	7.92E-01	1.16E-03	8.42E-05	0.00	1.15E-02	0.00	0.00	2.44E-04	0.00	2.35E-06
MTDCRF35-3	2.33E+00	3.34E-03	4.75E-04	0.00	1.15E-02	0.00	0.00	7.06E-04	0.00	6.80E-06
MTDCRF45-10	4.18E+00	6.08E-03	4.43E-04	0.00	1.15E-02	0.00	0.00	1.28E-03	0.00	1.24E-05
MTDCRF-CL-0.6-50	9.34E-01	1.16E-03	1.33E-03	0.00	1.15E-02	0.00	0.00	2.45E-04	0.00	2.36E-06
MTDCRFQ45-3	4.48E+00	6.51E-03	4.75E-04	0.00	1.15E-02	0.00	0.00	1.37E-03	0.00	1.32E-05
NHWD (kg)										
MT01-1035-069001	4.79E+01	6.99E-02	1.27E-01	0.00	2.46E+00	0.00	0.00	1.48E-02	0.00	1.17E-04
MT01-1045-069001	1.33E+02	1.97E-01	2.04E-01	0.00	4.64E+00	0.00	0.00	4.16E-02	0.00	3.29E-04
MT01-1135-069002	2.41E+01	3.49E-02	9.30E-02	0.00	3.94E+00	0.00	0.00	7.36E-03	0.00	5.82E-05
MT01-1145-069002	4.65E+01	6.84E-02	8.79E-02	0.00	4.64E+00	0.00	0.00	1.44E-02	0.00	1.14E-04
MT01-1145-069003	1.91E+01	2.79E-02	3.84E-02	0.00	8.04E+00	0.00	0.00	5.90E-03	0.00	4.67E-05
MT01-1145-069017	1.46E+01	2.14E-02	2.83E-02	0.00	1.11E+01	0.00	0.00	4.51E-03	0.00	3.57E-05
MT01-1145-069018	2.16E+01	3.20E-02	4.75E-02	0.00	7.43E+00	0.00	0.00	6.75E-03	0.00	5.34E-05
MT01-1225-069002	4.44E+01	5.45E-02	8.35E-01	0.00	3.10E-01	0.00	0.00	1.15E-02	0.00	9.11E-05
MT01-1225-069005	3.15E+01	3.88E-02	5.95E-01	0.00	3.10E-01	0.00	0.00	8.20E-03	0.00	6.48E-05
MT01-1228-069002	5.22E+01	7.18E-02	4.59E-01	0.00	3.10E-01	0.00	0.00	1.52E-02	0.00	1.20E-04
MT01-1235-069001	2.71E+01	3.51E-02	1.53E-01	0.00	3.10E-01	0.00	0.00	7.41E-03	0.00	5.86E-05
MT01-1245-069002	6.19E+01	9.10E-02	1.53E-01	0.00	3.10E-01	0.00	0.00	1.92E-02	0.00	1.52E-04
MT01-1325-069028-CT	1.22E+02	1.64E-01	1.31E+00	0.00	3.10E-01	0.00	0.00	3.46E-02	0.00	2.74E-04
MT01-1325-069029-CT	5.01E+01	6.68E-02	5.95E-01	0.00	3.10E-01	0.00	0.00	1.41E-02	0.00	1.12E-04
MT01-1325-069037-CT	7.90E+01	1.05E-01	9.37E-01	0.00	3.10E-01	0.00	0.00	2.22E-02	0.00	1.76E-04
MT01-1328-069008-CT	5.86E+01	8.30E-02	3.27E-01	0.00	3.10E-01	0.00	0.00	1.75E-02	0.00	1.39E-04
MT01-1335-069001	8.19E+01	1.18E-01	3.06E-01	0.00	3.10E-01	0.00	0.00	2.50E-02	0.00	1.97E-04
MT01-1335-069002	3.49E+01	5.03E-02	1.53E-01	0.00	3.10E-01	0.00	0.00	1.06E-02	0.00	8.39E-05
MT01-1345-069001	1.50E+02	2.20E-01	3.06E-01	0.00	3.10E-01	0.00	0.00	4.65E-02	0.00	3.68E-04
MT01-1345-069002	1.03E+02	1.52E-01	2.04E-01	0.00	3.10E-01	0.00	0.00	3.20E-02	0.00	2.53E-04
MT01-1345-069003	7.52E+01	1.11E-01	1.53E-01	0.00	3.10E-01	0.00	0.00	2.34E-02	0.00	1.85E-04
MT01-1345-069004	6.43E+01	9.45E-02	1.28E-01	0.00	3.10E-01	0.00	0.00	2.00E-02	0.00	1.58E-04
MT01-2101-069002	1.99E+01	2.76E-02	1.27E-01	0.00	3.10E-01	0.00	0.00	5.83E-03	0.00	4.61E-05
MT01-3001-069001	2.25E+01	2.66E-02	5.09E-01	0.00	3.10E-01	0.00	0.00	5.62E-03	0.00	4.45E-05
MT01-3101-067004	2.78E+01	3.53E-02	4.50E-01	0.00	3.10E-01	0.00	0.00	7.45E-03	0.00	5.89E-05
MTAC45-20-M	1.44E+01	2.11E-02	2.83E-02	0.00	3.10E-01	0.00	0.00	4.46E-03	0.00	3.53E-05
MTACML35-6	2.75E+01	3.99E-02	9.30E-02	0.00	3.10E-01	0.00	0.00	8.43E-03	0.00	6.67E-05
MTACQ45-10-M	4.78E+01	7.07E-02	8.79E-02	0.00	3.10E-01	0.00	0.00	1.49E-02	0.00	1.18E-04
MTACQML35-6	3.22E+01	4.66E-02	1.27E-01	0.00	3.10E-01	0.00	0.00	9.83E-03	0.00	7.77E-05
MTACQRF35-6	3.36E+01	4.86E-02	1.27E-01	0.00	3.10E-01	0.00	0.00	1.03E-02	0.00	8.11E-05
MTACRF45-15	1.50E+01	2.23E-02	3.84E-02	0.00	3.10E-01	0.00	0.00	4.70E-03	0.00	3.72E-05
MTDCRF35-3	4.51E+01	6.44E-02	2.18E-01	0.00	3.10E-01	0.00	0.00	1.36E-02	0.00	1.08E-04
MTDCRF45-10	7.99E+01	1.17E-01	2.04E-01	0.00	3.10E-01	0.00	0.00	2.47E-02	0.00	1.96E-04
MTDCRF-CL-0.6-50	2.05E+01	2.24E-02	6.11E-01	0.00	3.10E-01	0.00	0.00	4.72E-03	0.00	3.74E-05
MTDCRFQ45-3	8.57E+01	1.25E-01	2.18E-01	0.00	3.10E-01	0.00	0.00	2.65E-02	0.00	2.09E-04
RWD (kg)										
MT01-1035-069001	5.32E-04	0.00	5.49E-09	0.00	9.47E-05	0.00	0.00	0.00	0.00	0.00
MT01-1045-069001	1.49E-03	0.00	8.78E-09	0.00	1.79E-04	0.00	0.00	0.00	0.00	0.00
MT01-1135-069002	2.71E-04	0.00	3.98E-09	0.00	1.52E-04	0.00	0.00	0.00	0.00	0.00
MT01-1145-069002	5.22E-04	0.00	3.77E-09	0.00	1.79E-04	0.00	0.00	0.00	0.00	0.00

MT01-1145-069003	2.21E-04	0.00	1.67E-09	0.00	3.10E-04	0.00	0.00	0.00	0.00	0.00
MT01-1145-069017	1.54E-04	0.00	1.24E-09	0.00	4.29E-04	0.00	0.00	0.00	0.00	0.00
MT01-1145-069018	2.31E-04	0.00	2.05E-09	0.00	2.86E-04	0.00	0.00	0.00	0.00	0.00
MT01-1225-069002	5.40E-04	0.00	3.60E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1225-069005	3.88E-04	0.00	2.56E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1228-069002	5.91E-04	0.00	1.98E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1235-069001	2.84E-04	0.00	6.57E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1245-069002	6.83E-04	0.00	6.57E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1325-069028-CT	1.42E-03	0.00	5.63E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1325-069029-CT	5.77E-04	0.00	2.56E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1325-069037-CT	9.23E-04	0.00	4.04E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1328-069008-CT	6.71E-04	0.00	1.41E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1335-069001	9.23E-04	0.00	1.32E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1335-069002	3.91E-04	0.00	6.57E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1345-069001	1.66E-03	0.00	1.32E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1345-069002	1.13E-03	0.00	8.78E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1345-069003	8.29E-04	0.00	6.57E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-1345-069004	7.14E-04	0.00	5.55E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-2101-069002	2.36E-04	0.00	5.49E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-3001-069001	2.71E-04	0.00	2.20E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MT01-3101-067004	3.31E-04	0.00	1.94E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTAC45-20-M	1.54E-04	0.00	1.24E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTACML35-6	3.07E-04	0.00	3.98E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTACQ45-10-M	5.26E-04	0.00	3.77E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTACQML35-6	3.53E-04	0.00	5.49E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTACQRF35-6	3.83E-04	0.00	5.49E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTACRF45-15	1.57E-04	0.00	1.67E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTDCRF35-3	5.10E-04	0.00	9.42E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTDCRF45-10	8.77E-04	0.00	8.78E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTDCRF-CL-0.6-50	2.52E-04	0.00	2.63E-08	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
MTDCRFQ45-3	9.49E-04	0.00	9.42E-09	0.00	1.19E-05	0.00	0.00	0.00	0.00	0.00
	CRU (kg)									
MT01-1035-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1045-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1135-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1228-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1235-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1245-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069028-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069029-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069037-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1328-069008-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

MT01-1335-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-2101-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3001-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3101-067004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTAC45-20-M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACML35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQ45-10-M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQML35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQRF35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACRF45-15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF35-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF45-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF-CL-0.6-50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRFQ45-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MR (kg)									
MT01-1035-069001	6.64E-04	1.60E-05	0.00	0.00	0.00	0.00	0.00	3.38E-06	1.25E+00	1.59E-08
MT01-1045-069001	1.87E-03	4.52E-05	0.00	0.00	0.00	0.00	0.00	9.54E-06	3.54E+00	4.48E-08
MT01-1135-069002	3.30E-04	7.99E-06	0.00	0.00	0.00	0.00	0.00	1.69E-06	6.26E-01	7.93E-09
MT01-1145-069002	6.47E-04	1.57E-05	0.00	0.00	0.00	0.00	0.00	3.31E-06	1.23E+00	1.56E-08
MT01-1145-069003	2.64E-04	6.41E-06	0.00	0.00	0.00	0.00	0.00	1.35E-06	5.01E-01	6.35E-09
MT01-1145-069017	2.03E-04	4.90E-06	0.00	0.00	0.00	0.00	0.00	1.03E-06	3.83E-01	4.86E-09
MT01-1145-069018	3.04E-04	7.33E-06	0.00	0.00	0.00	0.00	0.00	1.55E-06	5.73E-01	7.27E-09
MT01-1225-069002	5.16E-04	1.25E-05	0.00	0.00	0.00	0.00	0.00	2.64E-06	9.78E-01	1.24E-08
MT01-1225-069005	3.68E-04	8.90E-06	0.00	0.00	0.00	0.00	0.00	1.88E-06	6.97E-01	8.83E-09
MT01-1228-069002	6.81E-04	1.65E-05	0.00	0.00	0.00	0.00	0.00	3.48E-06	1.29E+00	1.63E-08
MT01-1235-069001	3.39E-04	8.05E-06	0.00	0.00	0.00	0.00	0.00	1.70E-06	6.30E-01	7.98E-09
MT01-1245-069002	8.61E-04	2.09E-05	0.00	0.00	0.00	0.00	0.00	4.40E-06	1.63E+00	2.07E-08
MT01-1325-069028-CT	1.55E-03	3.75E-05	0.00	0.00	0.00	0.00	0.00	7.93E-06	2.94E+00	3.72E-08
MT01-1325-069029-CT	6.31E-04	1.53E-05	0.00	0.00	0.00	0.00	0.00	3.23E-06	1.20E+00	1.52E-08
MT01-1325-069037-CT	9.97E-04	2.41E-05	0.00	0.00	0.00	0.00	0.00	5.09E-06	1.89E+00	2.39E-08
MT01-1328-069008-CT	7.87E-04	1.90E-05	0.00	0.00	0.00	0.00	0.00	4.02E-06	1.49E+00	1.89E-08
MT01-1335-069001	1.12E-03	2.71E-05	0.00	0.00	0.00	0.00	0.00	5.72E-06	2.12E+00	2.69E-08
MT01-1335-069002	4.76E-04	1.15E-05	0.00	0.00	0.00	0.00	0.00	2.43E-06	9.02E-01	1.14E-08
MT01-1345-069001	2.09E-03	5.05E-05	0.00	0.00	0.00	0.00	0.00	1.07E-05	3.96E+00	5.01E-08
MT01-1345-069002	1.44E-03	3.48E-05	0.00	0.00	0.00	0.00	0.00	7.34E-06	2.72E+00	3.45E-08
MT01-1345-069003	1.05E-03	2.54E-05	0.00	0.00	0.00	0.00	0.00	5.37E-06	1.99E+00	2.52E-08
MT01-1345-069004	8.96E-04	2.17E-05	0.00	0.00	0.00	0.00	0.00	4.57E-06	1.70E+00	2.15E-08
MT01-2101-069002	2.62E-04	6.33E-06	0.00	0.00	0.00	0.00	0.00	1.34E-06	4.95E-01	6.27E-09
MT01-3001-069001	2.52E-04	6.11E-06	0.00	0.00	0.00	0.00	0.00	1.29E-06	4.78E-01	6.06E-09
MT01-3101-067004	3.37E-04	8.08E-06	0.00	0.00	0.00	0.00	0.00	1.71E-06	6.33E-01	8.02E-09
MTAC45-20-M	2.01E-04	4.84E-06	0.00	0.00	0.00	0.00	0.00	1.02E-06	3.79E-01	4.80E-09
MTACML35-6	3.78E-04	9.15E-06	0.00	0.00	0.00	0.00	0.00	1.93E-06	7.16E-01	9.08E-09
MTACQ45-10-M	6.71E-04	1.62E-05	0.00	0.00	0.00	0.00	0.00	3.42E-06	1.27E+00	1.61E-08
MTACQML35-6	4.42E-04	1.07E-05	0.00	0.00	0.00	0.00	0.00	2.25E-06	8.35E-01	1.06E-08
MTACQRF35-6	4.61E-04	1.11E-05	0.00	0.00	0.00	0.00	0.00	2.35E-06	8.71E-01	1.10E-08

MTACRF45-15	2.11E-04	5.11E-06	0.00	0.00	0.00	0.00	0.00	1.08E-06	4.00E-01	5.06E-09
MTDCRF35-3	6.09E-04	1.48E-05	0.00	0.00	0.00	0.00	0.00	3.12E-06	1.16E+00	1.46E-08
MTDCRF45-10	1.11E-03	2.69E-05	0.00	0.00	0.00	0.00	0.00	5.67E-06	2.10E+00	2.66E-08
MTDCRF-CL-0.6-50	2.12E-04	5.13E-06	0.00	0.00	0.00	0.00	0.00	1.08E-06	4.01E-01	5.09E-09
MTDCRFQ45-3	1.19E-03	2.88E-05	0.00	0.00	0.00	0.00	0.00	6.07E-06	2.25E+00	2.85E-08
RE (MJ)										
MT01-1035-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1045-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1135-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1145-069018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1225-069005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1228-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1235-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1245-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069028-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069029-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1325-069037-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1328-069008-CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1335-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-1345-069004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-2101-069002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3001-069001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MT01-3101-067004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTAC45-20-M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACML35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQ45-10-M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQML35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACQRF35-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTACRF45-15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF35-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF45-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRF-CL-0.6-50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTDCRFQ45-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MER (kg)										
MT01-1035-069001	2.09E-06	1.73E-07	0.00	0.00	0.00	0.00	0.00	3.65E-08	0.00	8.00E-11
MT01-1045-069001	5.89E-06	4.88E-07	0.00	0.00	0.00	0.00	0.00	1.03E-07	0.00	2.25E-10
MT01-1135-069002	1.04E-06	8.63E-08	0.00	0.00	0.00	0.00	0.00	1.82E-08	0.00	4.00E-11
MT01-1145-069002	2.04E-06	1.69E-07	0.00	0.00	0.00	0.00	0.00	3.58E-08	0.00	7.80E-11
MT01-1145-069003	8.31E-07	6.92E-08	0.00	0.00	0.00	0.00	0.00	1.46E-08	0.00	3.20E-11
MT01-1145-069017	6.42E-07	5.29E-08	0.00	0.00	0.00	0.00	0.00	1.12E-08	0.00	2.40E-11

MT01-1145-069018	9.56E-07	7.91E-08	0.00	0.00	0.00	0.00	0.00	1.67E-08	0.00	3.70E-11
MT01-1225-069002	1.63E-06	1.35E-07	0.00	0.00	0.00	0.00	0.00	2.85E-08	0.00	6.20E-11
MT01-1225-069005	1.16E-06	9.61E-08	0.00	0.00	0.00	0.00	0.00	2.03E-08	0.00	4.40E-11
MT01-1228-069002	2.15E-06	1.78E-07	0.00	0.00	0.00	0.00	0.00	3.75E-08	0.00	8.20E-11
MT01-1235-069001	1.06E-06	8.69E-08	0.00	0.00	0.00	0.00	0.00	1.84E-08	0.00	4.00E-11
MT01-1245-069002	2.71E-06	2.25E-07	0.00	0.00	0.00	0.00	0.00	4.76E-08	0.00	1.04E-10
MT01-1325-069028-CT	4.89E-06	4.06E-07	0.00	0.00	0.00	0.00	0.00	8.56E-08	0.00	1.87E-10
MT01-1325-069029-CT	1.99E-06	1.65E-07	0.00	0.00	0.00	0.00	0.00	3.49E-08	0.00	7.60E-11
MT01-1325-069037-CT	3.15E-06	2.61E-07	0.00	0.00	0.00	0.00	0.00	5.50E-08	0.00	1.20E-10
MT01-1328-069008-CT	2.48E-06	2.06E-07	0.00	0.00	0.00	0.00	0.00	4.34E-08	0.00	9.50E-11
MT01-1335-069001	3.54E-06	2.93E-07	0.00	0.00	0.00	0.00	0.00	6.18E-08	0.00	1.35E-10
MT01-1335-069002	1.50E-06	1.24E-07	0.00	0.00	0.00	0.00	0.00	2.63E-08	0.00	5.70E-11
MT01-1345-069001	6.59E-06	5.46E-07	0.00	0.00	0.00	0.00	0.00	1.15E-07	0.00	2.52E-10
MT01-1345-069002	4.53E-06	3.76E-07	0.00	0.00	0.00	0.00	0.00	7.93E-08	0.00	1.73E-10
MT01-1345-069003	3.31E-06	2.75E-07	0.00	0.00	0.00	0.00	0.00	5.80E-08	0.00	1.27E-10
MT01-1345-069004	2.82E-06	2.34E-07	0.00	0.00	0.00	0.00	0.00	4.94E-08	0.00	1.08E-10
MT01-2101-069002	8.27E-07	6.83E-08	0.00	0.00	0.00	0.00	0.00	1.44E-08	0.00	3.20E-11
MT01-3001-069001	7.97E-07	6.60E-08	0.00	0.00	0.00	0.00	0.00	1.39E-08	0.00	3.00E-11
MT01-3101-067004	1.06E-06	8.73E-08	0.00	0.00	0.00	0.00	0.00	1.84E-08	0.00	4.00E-11
MTAC45-20-M	6.29E-07	5.23E-08	0.00	0.00	0.00	0.00	0.00	1.10E-08	0.00	2.40E-11
MTACML35-6	1.19E-06	9.89E-08	0.00	0.00	0.00	0.00	0.00	2.09E-08	0.00	4.60E-11
MTACQ45-10-M	2.12E-06	1.75E-07	0.00	0.00	0.00	0.00	0.00	3.70E-08	0.00	8.10E-11
MTACQML35-6	1.40E-06	1.15E-07	0.00	0.00	0.00	0.00	0.00	2.43E-08	0.00	5.30E-11
MTACQRF35-6	1.45E-06	1.20E-07	0.00	0.00	0.00	0.00	0.00	2.54E-08	0.00	5.50E-11
MTACRF45-15	6.68E-07	5.51E-08	0.00	0.00	0.00	0.00	0.00	1.16E-08	0.00	2.50E-11
MTDCRF35-3	1.92E-06	1.59E-07	0.00	0.00	0.00	0.00	0.00	3.37E-08	0.00	7.40E-11
MTDCRF45-10	3.49E-06	2.90E-07	0.00	0.00	0.00	0.00	0.00	6.12E-08	0.00	1.34E-10
MTDCRF-CL-0.6-50	6.68E-07	5.54E-08	0.00	0.00	0.00	0.00	0.00	1.17E-08	0.00	2.60E-11
MTDCRFQ45-3	3.75E-06	3.11E-07	0.00	0.00	0.00	0.00	0.00	6.56E-08	0.00	1.43E-10
	EEE (MJ)									
MT01-1035-069001	9.15E-03	1.48E-04	6.15E-07	0.00	0.00	0.00	0.00	3.12E-05	0.00	2.42E-07
MT01-1045-069001	2.57E-02	4.17E-04	9.99E-07	0.00	0.00	0.00	0.00	8.80E-05	0.00	6.81E-07
MT01-1135-069002	4.55E-03	7.38E-05	4.61E-07	0.00	0.00	0.00	0.00	1.56E-05	0.00	1.21E-07
MT01-1145-069002	8.89E-03	1.45E-04	4.35E-07	0.00	0.00	0.00	0.00	3.06E-05	0.00	2.37E-07
MT01-1145-069003	3.62E-03	5.91E-05	1.79E-07	0.00	0.00	0.00	0.00	1.25E-05	0.00	9.66E-08
MT01-1145-069017	2.81E-03	4.52E-05	1.28E-07	0.00	0.00	0.00	0.00	9.54E-06	0.00	7.39E-08
MT01-1145-069018	4.19E-03	6.76E-05	2.30E-07	0.00	0.00	0.00	0.00	1.43E-05	0.00	1.10E-07
MT01-1225-069002	7.09E-03	1.15E-04	4.05E-06	0.00	0.00	0.00	0.00	2.44E-05	0.00	1.89E-07
MT01-1225-069005	5.07E-03	8.21E-05	2.89E-06	0.00	0.00	0.00	0.00	1.73E-05	0.00	1.34E-07
MT01-1228-069002	9.37E-03	1.52E-04	2.23E-06	0.00	0.00	0.00	0.00	3.21E-05	0.00	2.48E-07
MT01-1235-069001	4.61E-03	7.43E-05	7.43E-07	0.00	0.00	0.00	0.00	1.57E-05	0.00	1.21E-07
MT01-1245-069002	1.18E-02	1.93E-04	7.43E-07	0.00	0.00	0.00	0.00	4.06E-05	0.00	3.15E-07
MT01-1325-069028-CT	2.13E-02	3.47E-04	6.32E-06	0.00	0.00	0.00	0.00	7.32E-05	0.00	5.66E-07
MT01-1325-069029-CT	8.67E-03	1.41E-04	2.89E-06	0.00	0.00	0.00	0.00	2.98E-05	0.00	2.31E-07
MT01-1325-069037-CT	1.37E-02	2.23E-04	4.53E-06	0.00	0.00	0.00	0.00	4.70E-05	0.00	3.64E-07
MT01-1328-069008-CT	1.08E-02	1.76E-04	1.59E-06	0.00	0.00	0.00	0.00	3.71E-05	0.00	2.87E-07
MT01-1335-069001	1.54E-02	2.50E-04	1.49E-06	0.00	0.00	0.00	0.00	5.28E-05	0.00	4.09E-07
MT01-1335-069002	6.54E-03	1.06E-04	7.43E-07	0.00	0.00	0.00	0.00	2.25E-05	0.00	1.74E-07
MT01-1345-069001	2.88E-02	4.66E-04	1.49E-06	0.00	0.00	0.00	0.00	9.85E-05	0.00	7.62E-07

MT01-1345-069002	1.98E-02	3.21E-04	9.99E-07	0.00	0.00	0.00	0.00	6.78E-05	0.00	5.25E-07
MT01-1345-069003	1.45E-02	2.35E-04	7.43E-07	0.00	0.00	0.00	0.00	4.96E-05	0.00	3.84E-07
MT01-1345-069004	1.23E-02	2.00E-04	6.15E-07	0.00	0.00	0.00	0.00	4.22E-05	0.00	3.27E-07
MT01-2101-069002	3.60E-03	5.84E-05	6.15E-07	0.00	0.00	0.00	0.00	1.23E-05	0.00	9.54E-08
MT01-3001-069001	3.47E-03	5.64E-05	2.46E-06	0.00	0.00	0.00	0.00	1.19E-05	0.00	9.21E-08
MT01-3101-067004	4.68E-03	7.46E-05	2.18E-06	0.00	0.00	0.00	0.00	1.58E-05	0.00	1.22E-07
MTAC45-20-M	2.77E-03	4.47E-05	1.28E-07	0.00	0.00	0.00	0.00	9.43E-06	0.00	7.30E-08
MTACML35-6	5.18E-03	8.45E-05	4.61E-07	0.00	0.00	0.00	0.00	1.78E-05	0.00	1.38E-07
MTACQ45-10-M	9.26E-03	1.50E-04	4.35E-07	0.00	0.00	0.00	0.00	3.16E-05	0.00	2.45E-07
MTACQML35-6	6.10E-03	9.85E-05	6.15E-07	0.00	0.00	0.00	0.00	2.08E-05	0.00	1.61E-07
MTACQRF35-6	6.35E-03	1.03E-04	6.15E-07	0.00	0.00	0.00	0.00	2.17E-05	0.00	1.68E-07
MTACRF45-15	2.92E-03	4.71E-05	1.79E-07	0.00	0.00	0.00	0.00	9.95E-06	0.00	7.70E-08
MTDCRF35-3	8.37E-03	1.36E-04	1.05E-06	0.00	0.00	0.00	0.00	2.88E-05	0.00	2.23E-07
MTDCRF45-10	1.52E-02	2.48E-04	9.99E-07	0.00	0.00	0.00	0.00	5.23E-05	0.00	4.05E-07
MTDCRF-CL-0.6-50	2.92E-03	4.73E-05	2.97E-06	0.00	0.00	0.00	0.00	9.99E-06	0.00	7.74E-08
MTDCRFQ45-3	1.64E-02	2.65E-04	1.05E-06	0.00	0.00	0.00	0.00	5.60E-05	0.00	4.34E-07
	EET (MJ)									
MT01-1035-069001	8.01E-03	1.86E-04	6.92E-07	0.00	0.00	0.00	0.00	3.93E-05	0.00	1.33E-07
MT01-1045-069001	2.25E-02	5.24E-04	1.12E-06	0.00	0.00	0.00	0.00	1.11E-04	0.00	3.75E-07
MT01-1135-069002	3.97E-03	9.28E-05	5.19E-07	0.00	0.00	0.00	0.00	1.96E-05	0.00	6.63E-08
MT01-1145-069002	7.82E-03	1.82E-04	4.90E-07	0.00	0.00	0.00	0.00	3.85E-05	0.00	1.30E-07
MT01-1145-069003	3.18E-03	7.44E-05	2.02E-07	0.00	0.00	0.00	0.00	1.57E-05	0.00	5.31E-08
MT01-1145-069017	2.45E-03	5.69E-05	1.44E-07	0.00	0.00	0.00	0.00	1.20E-05	0.00	4.06E-08
MT01-1145-069018	3.66E-03	8.51E-05	2.60E-07	0.00	0.00	0.00	0.00	1.80E-05	0.00	6.07E-08
MT01-1225-069002	6.24E-03	1.45E-04	4.56E-06	0.00	0.00	0.00	0.00	3.06E-05	0.00	1.04E-07
MT01-1225-069005	4.45E-03	1.03E-04	3.26E-06	0.00	0.00	0.00	0.00	2.18E-05	0.00	7.38E-08
MT01-1228-069002	8.21E-03	1.91E-04	2.51E-06	0.00	0.00	0.00	0.00	4.04E-05	0.00	1.37E-07
MT01-1235-069001	4.04E-03	9.35E-05	8.36E-07	0.00	0.00	0.00	0.00	1.97E-05	0.00	6.68E-08
MT01-1245-069002	1.04E-02	2.42E-04	8.36E-07	0.00	0.00	0.00	0.00	5.11E-05	0.00	1.73E-07
MT01-1325-069028-CT	1.87E-02	4.36E-04	7.12E-06	0.00	0.00	0.00	0.00	9.20E-05	0.00	3.11E-07
MT01-1325-069029-CT	7.62E-03	1.78E-04	3.26E-06	0.00	0.00	0.00	0.00	3.75E-05	0.00	1.27E-07
MT01-1325-069037-CT	1.21E-02	2.80E-04	5.10E-06	0.00	0.00	0.00	0.00	5.91E-05	0.00	2.00E-07
MT01-1328-069008-CT	9.49E-03	2.21E-04	1.79E-06	0.00	0.00	0.00	0.00	4.67E-05	0.00	1.58E-07
MT01-1335-069001	1.35E-02	3.15E-04	1.67E-06	0.00	0.00	0.00	0.00	6.64E-05	0.00	2.25E-07
MT01-1335-069002	5.74E-03	1.34E-04	8.36E-07	0.00	0.00	0.00	0.00	2.82E-05	0.00	9.56E-08
MT01-1345-069001	2.52E-02	5.87E-04	1.67E-06	0.00	0.00	0.00	0.00	1.24E-04	0.00	4.19E-07
MT01-1345-069002	1.73E-02	4.04E-04	1.12E-06	0.00	0.00	0.00	0.00	8.53E-05	0.00	2.88E-07
MT01-1345-069003	1.27E-02	2.95E-04	8.36E-07	0.00	0.00	0.00	0.00	6.24E-05	0.00	2.11E-07
MT01-1345-069004	1.08E-02	2.52E-04	6.92E-07	0.00	0.00	0.00	0.00	5.31E-05	0.00	1.80E-07
MT01-2101-069002	3.17E-03	7.34E-05	6.92E-07	0.00	0.00	0.00	0.00	1.55E-05	0.00	5.25E-08
MT01-3001-069001	3.05E-03	7.09E-05	2.77E-06	0.00	0.00	0.00	0.00	1.50E-05	0.00	5.06E-08
MT01-3101-067004	4.04E-03	9.39E-05	2.45E-06	0.00	0.00	0.00	0.00	1.98E-05	0.00	6.70E-08
MTAC45-20-M	2.40E-03	5.62E-05	1.44E-07	0.00	0.00	0.00	0.00	1.19E-05	0.00	4.01E-08
MTACML35-6	4.55E-03	1.06E-04	5.19E-07	0.00	0.00	0.00	0.00	2.24E-05	0.00	7.59E-08
MTACQ45-10-M	8.11E-03	1.88E-04	4.90E-07	0.00	0.00	0.00	0.00	3.97E-05	0.00	1.34E-07
MTACQML35-6	5.34E-03	1.24E-04	6.92E-07	0.00	0.00	0.00	0.00	2.62E-05	0.00	8.85E-08
MTACQRF35-6	5.55E-03	1.29E-04	6.92E-07	0.00	0.00	0.00	0.00	2.73E-05	0.00	9.23E-08
MTACRF45-15	2.55E-03	5.93E-05	2.02E-07	0.00	0.00	0.00	0.00	1.25E-05	0.00	4.23E-08
MTDCRF35-3	7.34E-03	1.71E-04	1.18E-06	0.00	0.00	0.00	0.00	3.62E-05	0.00	1.22E-07

MTDCRF45-10	1.34E-02	3.12E-04	1.12E-06	0.00	0.00	0.00	0.00	6.58E-05	0.00	2.23E-07
MTDCRF-CL-0.6-50	2.55E-03	5.96E-05	3.35E-06	0.00	0.00	0.00	0.00	1.26E-05	0.00	4.25E-08
MTDCRFQ45-3	1.43E-02	3.34E-04	1.18E-06	0.00	0.00	0.00	0.00	7.05E-05	0.00	2.38E-07

Information on biogenic carbon content at factory gate:

Products	Biogenic carbon content in product (kg C)	Biogenic carbon content in packaging (kg C)
MT01-1035-069001	0.00E+00	4.34E-02
MT01-1045-069001	0.00E+00	6.95E-02
MT01-1135-069002	0.00E+00	3.16E-02
MT01-1145-069002	0.00E+00	2.98E-02
MT01-1145-069003	0.00E+00	1.30E-02
MT01-1145-069017	0.00E+00	9.62E-03
MT01-1145-069018	0.00E+00	1.60E-02
MT01-1225-069002	0.00E+00	2.85E-01
MT01-1225-069005	0.00E+00	2.03E-01
MT01-1228-069002	0.00E+00	1.56E-01
MT01-1235-069001	0.00E+00	5.21E-02
MT01-1245-069002	0.00E+00	5.21E-02
MT01-1325-069028-CT	0.00E+00	4.45E-01
MT01-1325-069029-CT	0.00E+00	2.03E-01
MT01-1325-069037-CT	0.00E+00	3.19E-01
MT01-1328-069008-CT	0.00E+00	1.12E-01
MT01-1335-069001	0.00E+00	1.04E-01
MT01-1335-069002	0.00E+00	5.21E-02
MT01-1345-069001	0.00E+00	1.04E-01
MT01-1345-069002	0.00E+00	6.95E-02
MT01-1345-069003	0.00E+00	5.21E-02
MT01-1345-069004	0.00E+00	4.37E-02
MT01-2101-069002	0.00E+00	4.34E-02
MT01-3001-069001	0.00E+00	1.74E-01
MT01-3101-067004	0.00E+00	1.53E-01
MTAC45-20-M	0.00E+00	9.77E-03
MTACML35-6	0.00E+00	3.16E-02
MTACQ45-10-M	0.00E+00	2.98E-02
MTACQML35-6	0.00E+00	4.34E-02
MTACQRF35-6	0.00E+00	4.34E-02
MTACRF45-15	0.00E+00	1.30E-02
MTDCRF35-3	0.00E+00	7.44E-02
MTDCRF45-10	0.00E+00	6.95E-02
MTDCRF-CL-0.6-50	0.00E+00	2.08E-01
MTDCRFQ45-3	0.00E+00	7.44E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Interpretation:

This study highlights the environmental impacts of Automate AC/DC Motors based on a per-functional-unit analysis. It identifies key contributors or environmental hotspots that significantly contribute to the GWP of the products. The study focuses on two product lines: Battery-Powered Motors and Line Voltage Motors.

Battery-Powered Motors

The most significant contributor to the products' GWP (measured in kg CO_2 eq) is Module A1: Raw Material Extraction and Processing, account for approximately 86% to 97% of the total embodied emissions within Module A1. The main contributors within this module include:

- Aluminium metal: 28%
- Printed wiring board: 15%
- Polycarbonate plastic: 11.6%
- Steel production: 11%
- Copper production: 7%
- Metal working (steel and aluminium): 10.4% and 6.5%, respectively.

Following this, the second most significant source of GWP emissions stems from Module A3 (Production), which includes warehousing operations, primarily driven by electricity, accounts for 2%-8% of the total emissions. The Use Phase (Module B6 - Operational energy use) contributes an additional impact of 0.3%–3% of the total GWP.

Line Voltage Motors

In addition to the Raw Material Extraction and Processing (Module A1). the Use Phase (Module B6) represents the dominant contributor to the total GWP, as these motors rely on continuous electrical energy consumption during operation. The magnitude of the impact is closely correlated with the motor's power demand, particularly the operating current and duration of use. Models with higher current requirements demonstrate correspondingly greater electricity consumption during use, resulting in higher GWP values over their service life.

For both product lines, other life-cycle stages, including Delivery to Job-site (A4), Installation (A5) and End-of-Life (C1–C4), contribute to the overall global warming potential (GWP), their impact is comparatively smaller, accounting for less than 5% of the total impact.

ADDITIONAL ENVIRONMENTAL INFO

- Product use and installation shall comply with the PDS and installation guidelines as recommended by the Rollease Acmeda.
- The product has been tested for compliance with the EU RoHS Directive 2011/65/EU and its amendment (EU) 2015/863.
- The products contain no substances of very high concern (SVHC) as defined by the REACH Regulation (EC) No. 1907/2006, at concentrations above 0.1% by mass.
- The products are free from indoor air emissions, gamma or ionizing radiation, and the release
- of chemicals into the air, water, or soil.
- Delayed emissions were not considered in this study,
- Further information can be found at: https://www.rolleaseacmeda.com/us

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