

Madaster Release notes

Made for Madaster users Date 22 December 2021

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Table of Contents

1	Releases	5
2	Build 11424	6
2.1	New functionalities	6
2.1.1	Expansion of data upload settings (preset)	6
2.1.2	Delete building data	6
2.1.3	Expansion of building archive function	7
2.1.4	Add image to database [producer function]	7
2.1.5	Add manufacturer and production locations [producer function]	8
2.1.6	Insert bill of materials of products in weight [producer function]	9
2.1.7	Display CO2/m2 of building (CO2 tool)	10
2.2	API	10
2.3	Bug fixes	10
3	Build 10761	12
3.1	New functionalities	12
3.1.1	Preview Features	12
3.1.2	Additional insights on Circularity tab	13
3.1.3	Additional source data fields	16
3.1.4	Data upload settings	18
3.1.5	Expanding element adaptability	19
3.1.6	Product enhancements	22
3.1.7	Add external link in Dossier	25
3.2	API	25
3.3	Bug fixes	25
4	Build 9731	26
4.1	New functionalities	26
4.1.1	(NL) NAA.K.T. material naming added as search criteria	26
4.1.2	Extension matching	26
4.1.3	Extension Madaster Excel upload template	28
4.1.4	Extension Madaster Property set (IFC)	28
4.1.5	Extension Madaster IFC import properties	29
4.1.6	Expansion of Environment tab	
4.1.7	Removing duplications in material naming (IFC source file)	

4.1.8	Extension filter 'Unit dimension' (Enrich tab)31
4.1.9	Change of column naming in Madaster Excel upload template
4.1.10	Add product images
4.1.11	API
4.2	Bug fixes
5	Build 9044
5.1	New functionalities
5.1.1	Define owner label on folder type for use in materials passport
5.1.2	Multiple classification methods per building
5.1.3	New classification method: NL-SfB table 1 V201912
5.1.4	Improvements to vendor and verified database accounts
5.1.5	Material Passport enhancements
5.1.6	Visual adjustment Circularity tab34
5.1.7	API
5.2	Bug fixes
6	Build 8820
6.1	New functionalities
6.1.1	Expansion of matching types within the search criterion material / product
6.1.2 dismantling co	Possibility to override the default (based on building usage) demolition and osts
7	Build 8556
7.1	Bug Fixes
8	Build 8382
8.1	New features
8.1.1	UI improvements
8.1.2	New classification method "Shearing Layer"
8.1.3	New Button "Public Data" on building (NL only)
8.2	Bug Fixes
9	Build 8029
9.1	Bug Fixes
10	Build 8023
10.1	Bug Fixes
11	Build 8021
11.1	Expansion material & product fields42

MADASTER

11.2	Addition of "Environment"-tab	42
11.2.1	Addition of "Circularity"-tab	43
11.2.2	New product identification fields	44
11.2.3	New fields for product origin	44
11.3	Upload new version of a source file which preserves existing mapping	45
11.4	Platform improvements	45
11.4.1	Add complete product in enrichment process	45
11.4.2	Financial dataset representation (material)	45
11.4.3	Other bug fixes	46

1 Releases

Build number	Release date
11424	22 nd December 2021
10761	15 th November 2021
9731	17 th Augustus 2021
9044	10 th May 2021
8820	1 st April 2021
8556	22 nd March 2021
8382	11 th March 2021
8029	1 st March 2021
8023	26 th February 2021
8021	25 th February 2021

2.1 New functionalities

2.1.1 Expansion of data upload settings (preset)

Since the previous release, the user has the possibility to define his/her preferred Madaster upload settings (preset) concerning classification method, languages for enrichment, datasets, etc. In addition to a more efficient upload process, this function also offers the user more flexibility to read data from the source file into Madaster.

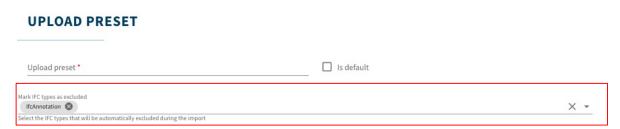
GENERAL	DOSSIER	USERS	MATERIALS & PRODUCTS	SETTINGS	FEATURES
---------	---------	-------	----------------------	----------	----------

This data upload setting (preset) has now been extended with:

1. The 'Phase' property set and name. If these values are included in another property set in the IFC source file, it can be specified here (before uploading the file) so that Madaster reads this value correctly.

UPLOAD PRESET		
Upload preset *	Is default	
PropertySet for Phase	Property name for Phase	

2. A list of IFC types that can be automatically excluded during the source file upload process. This prevents unnecessary manual work while enriching elements in Madaster.



2.1.2 Delete building data

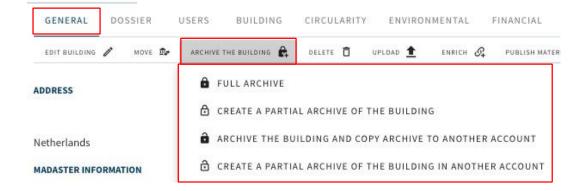
When deleting a building in Madaster, the user is now consulted which underlying objects (in the form of archive or split building number) should be kept. One or more buildings in Madaster are

removed based on the user's selection. The vertical folder type structure is then automatically adapted to the new situation. The following logic has been added:

- If a child archive or a split building is not removed, the object left behind, is moved to the parent folder type level.
- If the building has a database of products and materials and a split building remains, the building database is moved to the parent folder type level.

2.1.3 Expansion of building archive function

When a building file is complete, it should be archived in Madaster. This is also a prerequisite for transferring a building dossier in Madaster to the client or end customer. In addition to the already available function 'full archive', three additional archive functions have been added, namely:



- **Partial archive** items from validated databases and globally available manufacturer databases are not copied to the building archive database. Only items from non-globally available databases are included in the archive.
- **Full archive + copy to another account** the entire archive is created and transferred directly to another account without being kept in the original account. The copied building can be edited under the new account and contains a database with all (in the initial building) applied materials and products.
- Partial archive of building in another account the partial archive is created and transferred directly to another account without being kept in the original account. The copied building can be edited under the new account and contains a database containing only the materials and products applied (in the initial building) from non-globally available databases.

2.1.4 Add image to database [producer function]

The Madaster platform contains generically available databases and specific manufacturer databases with materials and products. Database owners (producers, etc.) now also have the option to add an image to the root and sub-level databases.

•	Hoek Producent	^	Home > Hoek Producent	
0))	Hook Producer		SUPPLIER SETTINGS USERS DATABASE	S
		HOEK PRODUCENT	EDIT 🖉 NEW DATABASE 🕀	
		Name Hoek Producent		
			Logo	
			ō	

2.1.5 Add manufacturer and production locations [producer function]

Manufacturers now have the option in Madaster to add multiple manufacturer and production locations to their database settings.

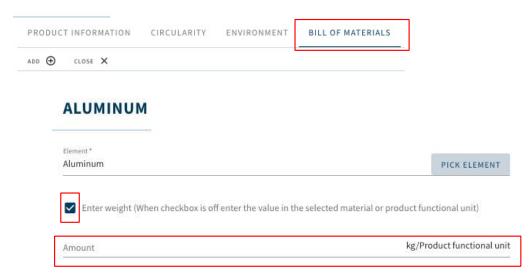
Hoek Producent	^	HOEK PRODUCENT
Hook Producer		SUPPLIER SETTINGS USERS DATABASES
		ADD NEW MANUFACTURER OR PRODUCTION SITE INFORMATION
MANUFACTUR	ER OR PRODUCT	ION SITE INFORMATION
	ER OR PRODUCT	ION SITE INFORMATION
MANUFACTUR	ER OR PRODUCT	TION SITE INFORMATION

When adding products to their database(s), the producer can then select the relevant manufacturer and/or production location. This prevents such information having to be entered repeatedly when adding a product in Madaster.

ATABASE	USERS SHARED WITH	
DIT DATABASE PRO	PERTIES 🧨 DELETE DATABASE 🛅 ADD MATERIAL 🕀 ADD PRODUCT 🕀	
	PRODUCT INFORMATION CIRCULARITY ENVIRONMENT SEARCH CRITERIA	
	SAVE CLOSE X	
	MANUFACTURER	
	Name	
	PRODUCTION SITE	

2.1.6 Insert bill of materials of products in weight [producer function]

When adding a product in Madaster, the user/producer can also specify the bill of materials (material composition) of the product. In this release, the function has been extended to enter the bill of materials in weight (kg).



If the input of weight (in kg) is not selected by the user/producer, the material composition can be entered in the functional unit (m3, m2, m1, %) depending on the chosen product type of the product to be added in Madaster.

2.1.7 Display CO2/m2 of building (CO2 tool)

If one or more elements in the source file (IFC/Excel) are linked to a product that contains environmental impact expressed in "**Global Warming Potential 100 years (kg CO2e)**", then the "General" tab of the building shows the total CO2 value in weight (kg) per square meter of the building.

PRODUCT X					
PRODUCT INFORMATION CIRCULARITY ENVIRONMENT	BILL OF MATERIALS SEARCH CRITERIA	DOSSIER FINANCIAL			
EDIT 🖋					
Dataset owner:		Dataset	type:		
Reference year:	•		valid until year:		
Compliance:	EN 15804	Environ	mental Cost Indicator:	€0	
EN 15804:2012-04+A1 2013					^
IMPACT CATEGORY	A1-A3 A4	A5 B1	B2 B3 B4 B5 B6	B7 C1	C2 C3 C4 D
Global Warming Potential 100 years (kg CO2e)	1,398.1 31.7	120 1,640 14		3.08	159 0.853 -
ADDRESS	BUILDING CIRCULARIT	Y ENVIRONMENTAL	FINANCIAL UPLOAD SET	PUBLIC DATA 💭	NEW DATABASE
Netherlands MADASTER INFORMATION					168.38 kg
Material Classification:		Madaster			CO ₂ eq/m ²
Usage:		Offices (Office < 1000m	2)		
0			-/		
Gross Surface Area:		100 m ²		L	

The prerequisite is that the 'feature' function "Embodied carbon overview" is activated at account level.



2.2 API

No new functions have been added to the public API in this release.

2.3 Bug fixes

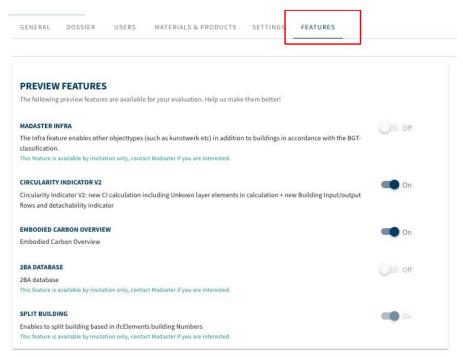
The following bugs have been resolved:

- If an element in a source file contains more than 50 sub-elements, this share will not be displayed in the "Enrich" tab.
- Excluding a sub-element is not possible while the top element remains active.
- Quantities of surface, length and quantity products are not fully shown in the PDF overview of the materials passport.
- Deviations in the 'manager' profile with regard to established user rights.
- Product images are not shown in the recent items section.
- Not possible to delete a building if it contains a database of materials/products.
- Ability to use data upload setting (Preset), while required field is not filled in.
- Cannot set folder as favorite.
- Volume calculation is incomplete if product composition contains a surface, length or quantity product without product composition.
- Manually assigning a new building number in the "Enrich" tab not available for "Split Building" function.
- Incorrect display of ratio (%) building numbers in element information ("Split building" function).
- When selecting alternative pricing set (on material), transportation and handling costs are not shown in the "Financial" tab.
- Most recent building energy label "A++++" is missing from selection on "General" tab.
- API: Error using floor create/update in building file element.

3.1 New functionalities

3.1.1 Preview Features

At company account level, the Madaster user can activate, use, and evaluate new functions ('preview features'). These functions will be further developed based on user feedback. Preview features can be activated directly by the user or are available by invitation and/or under certain conditions.



3.1.1.1 Split building feature

The 'split building' feature (only available by invitation) allows Madaster users to create individual building dossiers and passports from a prepared IFC file that contains multiple buildings/homes. This makes it superfluous to split up (IFC) models per building/home prior to being uploaded into the Madaster platform.

To use this feature, each element in the IFC source file should contain an individual building number. Prior to uploading the IFC source file, both the property name and property set containing the building number must be specified at account level in Madaster (see section 3.1.4 for details).

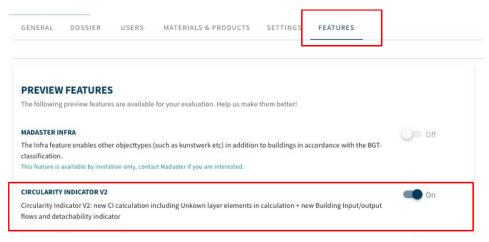
UPLOAD PRESET

Upload preset *	Is default
Classification method	
PropertySet for Buildingnumber	Property Name for the buildingnumber
Languages for enrichment	
Indicate to which sources in the Madaster platform the elements in the file T_0 add or remove a source, select the '+' or 'x' sign at the end of a source na	to be uploaded should automatically be linked and in which order this should be done per elemen ame.
Available sources	Selected sources

3.1.1.2 Circularity Indicator V2

The 'CI V2' feature (to be activated directly by the user) offers Madaster users the following additional insights:

- Adjusted circularity calculation, where elements without a classification code are no longer excluded.
- Input flow (primary vs. secondary material sources) and output flow (available for reuse and recycling) of materials in kilograms and percentages on building level and on building layer, such as: Structure, Skin, Services etc. (see section 3.1.2.1 for details).
- Degree of detachability (% detachability index) of the building, including index quality score (see section 3.1.2.2 for details).

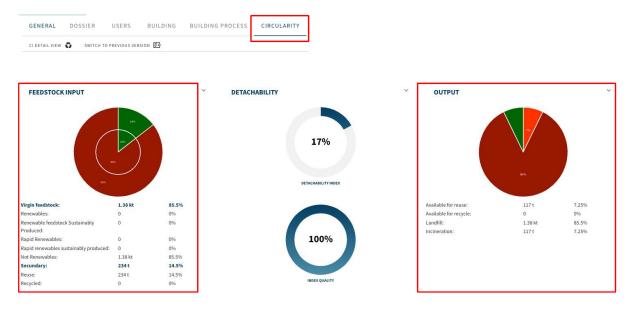


3.1.2 Additional insights on Circularity tab

By activating the 'CI V2' preview feature (see previous section), Madaster offers its users additional insights on the buildings Circularity tab:

3.1.2.1 Feedstock input & Output

By matching elements from a source file with materials/products in a Madaster dataset, the Madaster platform can provide insight into the "feedstock input" flow and "Output" flow of materials. The feedstock input flow indicates the amount (in weight) and ratio (in %) of primary (virgin) and secondary (reused/recycled) materials used in the building's construction phase. The output flow shows the amount (in weight) and ratio (in %) of materials released at the building's end of life stage, categorized according to materials available for reuse, recycling, landfill and incineration.



By clicking the (feedstock input or output flow) pie chart on the building's Circularity tab, a more detailed view is displayed, in which these indicators are visible per building layer (e.g., Structure, Skin, etc.). Even more specs are displayed when the user expands the feedstock input and/or output rows in this view (via the menu on the right-hand side).

			\square	f				7
	TOTALS	SITE	STRUCTURE	SKIN	SERVICES	SPACE PLAN	STUFF	UNKNOWN
EEDSTOCK INPUT								
PETACHABILITY								
rtachability index	17%	Not Applicable	17%				Not Applicable	
			\odot					
JTPUT								

3.1.2.2 Detachability (index & quality score)

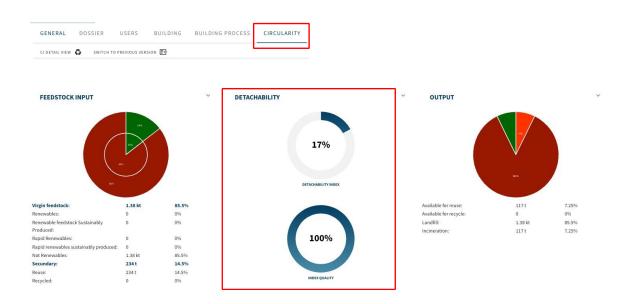
Madaster offers users the option, in addition to the building's circularity level, to also display the degree of detachability on building and building layer level. As such, it should indicate how detachable a building (shell) is and the products contained within it.

This detachability indication in Madaster is based on the revised (2.0) version of the uniform measurement method for detachability, as described in the report '<u>Circular Buildings</u> – a measurement method for detachability 2.0'. This methodology has been developed and tested by a consortium of Alba Concepts, Dutch Green Building Council, Netherlands Enterprise Agency and W/E Adviseurs on behalf of the Ministry of the Interior and the Transition Agenda Circular Building Economy.

The following detachability factors are considered:

- **Connection type**: where dry connections are being preferred over connections with added elements and direct, integral connections taking precedence over soft and hard chemical ones.
- Accessibility of the connection: how easily you can (physically) reach the connecting elements and to what extent this causes damage to nearby objects.
- Intersections: indicates the extent to which products overlap or are integrated with each other. The higher the integration, the more actions required to disassemble an element at the end of its life.
- **Product edges inclusion**: assessment of how products are placed in a composition and whether it is open or closed. A 'locked up' product can only be dismantled in the reverse order of construction.

The building's detachability index (in %) is displayed on the Madaster "Circularity" tab when the 'CI V2' feature is active (see section 3.1.1.2). This index is the sum of the number of individual elements within the building, which are linked to a product in Madaster, that (1) has the above four detachability factors filled in (or taken over from the IFC element) and (2) where the shadow costs per unit of the product are available (in the product's "Environment" tab).



The index quality indicator shows the ratio (in%) of the number of products for which a releasability index has been calculated compared to the total number of elements in the building that are linked to a product in Madaster.

By clicking on the detachability pie charts, a detail view is displayed, in which these indicators are provided per building layer (excluding Site and Stuff). Even more specs are displayed when the user expands the detachability row in this view (via the menu on the right-hand side).

÷			^	\wedge		~		
		<u>101</u>						2
	TOTALS	SITE	STRUCTURE	SKIN	SERVICES	SPACE PLAN	STUFF	UNKNOWN
EDSTOCK INPUT								
ETACHABILITY	100 X		Ros Hos					
etachability index	176	Not Applicable	17%				Net Applicable	
JTPUT								

3.1.3 Additional source data fields

3.1.3.1 Additional fields Madaster IFC property set

The Madaster platform can read a building's data from an IFC file. To provide insight into the degree of detachability of applied products in the building, the existing Madaster Property set "Pset_Madaster" (a set of properties in which certain IFC properties are bundled), has been expanded with new data fields:

Detachability Connection Type	Detachability Connection TypeDetail
DryConnection	Unknown
DryConnection	None
DryConnection	Click
DryConnection	Velcro
DryConnection	Magnetic
AddedConnectionConnection	Unknown
AddedConnectionConnection	BoltAndNut
AddedConnectionConnection	Spring
AddedConnectionConnection	Corner
AddedConnectionConnection	Screw
DirectConnection	Unknown
DirectConnection	Peg
DirectConnection	Nail
SoftChemicalConnection	Unknown
SoftChemicalConnection	Sealant
SoftChemicalConnection	Foam
HardChemicalConnection	Unknown
HardChemicalConnection	Glue
HardChemicalConnection	LandFill
HardChemicalConnection	Weld
HardChemicalConnection	Concrete
HardChemicalConnection	ChemicalAnchor

1. Data fields **DetachabilityConnectionType** and **DetachabilityConnectionTypeDetail** are used to indicate the connection type.

2. **DetachabilityAccessibility** data field to indicate accessibility of the connection.

Value	Explanation
Accessible	Freely accessible without additional actions
PartialNoDamage	Accessible with additional actions that do not cause damage
PartialWithRepairableDamage	Accessible with additional operations with fully repairable damage
PartialWithDamage	Accessible with additional operations with partially repairable damage

NotAccessible	Not accessible - irreparable damage to the product or surrounding products
	products

3. **DetachabilityIntersection** data field to indicate the intersections.

Value	Explanation
None	No intersections - modular zoning of products or elements from different layers
Incidental	Occasional intersections of products or elements from different layers
Complete	Full integration of products or elements from different layers

4. DetachabilityProductEdge data field to indicate the product edges inclusion.

Value	Explanation	
Open	Open, no obstacle to the (intermediate) removal of products or elements	
Overlapping	Overlap, partial obstruction to (intermediate) removal of products or elements	
Closed	Closed, complete obstruction to (intermediate) removal of products or elements	

3.1.3.2 Additional fields Madaster Excel upload template

The Madaster platform can read a building's data also from an Excel template. To provide insight into the degree of detachability of applied products in the building, the existing Madaster Excel template has been expanded with new data fields:

- Connection type
- Accessibility of the connection
- Intersections
- Product edges inclusion



These additional data fields are read in Madaster and assigned to the Madaster element.

3.1.4 Data upload settings

On different levels (account, folder type & building) within the Madaster platform, default upload preferences can be set and selected regarding classification method, language(s) for enrichment,

selection of source files (incl. priority) and property settings for building numbers (for 'split building' feature).

Upload settings created at a higher level in the navigation tree (e.g., account, folder type, building) are made available by default at the lower levels as well, but this inheritance can also be broken at a lower level.

GENERAL DOSSIER	R USERS MATERIALS & PRODUCTS SETTINGS	FEATURES
PRESETS FOR UPLOAD	FOLDER TYPE	
	UPLOAD PRESET	
	Upload preset *	Is default
	Classification method	
	PropertySet for Buildingnumber	Property Name for the buildingnumber
	Languages for enrichment	*
	Indicate to which sources in the Madaster platform the elements in the file to be uplo To add or remove a source, select the '4' or 'x' sign at the end of a source name.	paded should automatically be linked and in which order this should be done per element.
	Available sources	Selected sources

3.1.4.1 Activate/Deactivate/Delete multiple source files

In the "Dossier" tab at building level, a Madaster user can activate, deactivate, or delete multiple source files at the same time. To use this function, first select the tick boxes of the appropriate source files. Subsequently, click the activate, deactivate, or delete button in the menu that becomes available.



3.1.4.2 Phasing out Revit & Archicad datasets

When upload source data into Madaster ("Dossier" tab), the user can select multiple datasets in Madaster. These datasets are used during the matching process to link elements in source files based on search criteria to a material/product in one of the selected databases. In this release, both the Revit and Archicad datasets are no longer available for matching purposes (existing links to these datasets remain intact).

3.1.5 Expanding element adaptability

After the input and processing of source data in Madaster, users can adjust source data elements in the Madaster platform. This is done in the "Enrich" tab. After selecting one or more elements, the user clicks on the 'Edit' button (pen icon).

DESELECTEER (2)	2	n	12	SLUIT IN	SLUIT UIT
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3.1.5.1 Adjust classification code per element (incl. bulk edit)

Subsequently, it's possible to adjust the classification code of one or more elements (material and product) at the same time (bulk).

× Edit: NLRS_31_GM_WPB_SH_prefab beton raamdorpel recht_gen_KG:RD160C-GRIJS	10175090 🗈 SAVE
Phase Casco	×
Classification 31.20 - buitenwandopeningen; gevuld met ramen, algemeen (verzamel:aiveau)	~
Edit building numbers	

Click this field and then select the desired classification code from the defined list. Finally, click on the 'Save' button to save the changes.

3.1.5.2 Adjust phasing per element (incl. bulk edit)

Subsequently, it's possible to adjust the phase (e.g., demolition, casco, new materials) of one or more elements (material and product) at the same time (bulk).

×	Edit: NLRS_31_GM_WPB_SH_prefab beton raamdorpel recht_gen_KG:RD160C-GRIJS:10175090	🖬 SAVE
Phase Casco		•
Classifi 31.20	^{cation}) - buitenwandopeningen; gevuld met ramen, algemeen (verzamelniveau)	

D Edit building numbers

Click this field and then select the desired classification code from the defined list. Finally, click on the 'Save' button to save the changes.

3.1.5.3 Adjust building number per element (split building function)

Subsequently, it is possible to adjust the (degree of) building number allocation of one or more elements (material and product) at the same time (bulk).

 Edit: NLRS_31_GM_WPB_SH_prefab beton raamdorpel recl 	nt_gen_KG:RD160C-GRIJS:10175090	🖬 SAV
Phase		
Casco		*
Classification		
31.20 - buitenwandopeningen; gevuld met ramen, algemeen (verzamelniveau)		v
Edit building numbers		
Building number	Ratio (%)	\oplus
18	100%	10

To do this, activate the function 'Edit building numbers' and then allocate the desired ratio (%) to the available building numbers. Finally, click on the 'Save' button to save the changes. See section 3.1.1.1 for conditions and more details.

3.1.5.4 Adjust Reuse (Feedstock input & Output)

Subsequently, it is possible to adjust the degree of reuse in the construction phase (Feedstock input) and at the end-of-life phase (output) of one or more elements (product only) at the same time (bulk).

	SAVE
FEEDSTOCK INPUT	
Reuse	%
DETACHABILITY	
Connection type (product default value: Connection with added elements)	
Connection with added elements	•
Connection detail	
Spring connection	*
Connection accessibility (product standard value: Accessible with additional operations with fully repairable damage)	
Accessible with additional operations with partially repairable damage	-
Intersections (product default value: No intersections - modular zoning of products or elements from different layers)	
No intersections - modular zoning of products or elements from different layers	*
Product edges (product default value: Open, no obstacle to the (intermediate) removal of products or elements)	
Overlap, partial obstruction to (intermediate) removal of products or elements	•
ουτρυτ	
Available for reuse	%
Product value: 0%	

If desired, complete the fields 'Input flow % reuse' and 'Output flow % available for reuse'. Finally, click on the 'Save' button to save the changes.

3.1.5.5 Adjust detachability per element (incl. bulk edit)

Subsequently, it is possible to adjust the detachability parameters of one or more elements (product only) at the same time (bulk).

	• SAVE
FEEDSTOCK INPUT	
Reuse	%
DETACHABILITY	
Connection type (product default value: Connection with added elements)	
Connection with added elements	*
Connection detail	
Spring connection	Ŧ
Connection accessibility (product standard value: Accessible with additional operations with fully repairable damage)	
Accessible with additional operations with partially repairable damage	*
Intersections (product default value: No intersections - modular zoning of products or elements from different layers)	
No intersections - modular zoning of products or elements from different layers	v
Product edges (product default value: Open, no obstacle to the (intermediate) removal of products or elements)	
Overlap, partial obstruction to (intermediate) removal of products or elements	-

Adjust the desired detachability parameters. Clicking the 'Save' button will save the adjusted parameters. Detachability parameters cannot be edited when the selected building elements are matched to different products.

3.1.6 Product enhancements

In this release, several enhancements have been made on the various tabs at the product level in the Madaster platform.

3.1.6.1 Do not use Bill of Materials Calculations

If the product composition is not to be made available in Madaster, the supplier/manufacturer of the product can select the product option 'Do not use Bill of Materials calculations' in the 'Product information' tab.

PRODUCT INFORMATION	CIRCULARITY	ENVIRONMENT
SAVE 💽 CLOSE 🗙		
GENERAL		
Product name *		
Туре		
Volume		
Product code		
GTIN		
Functional lifespan (years)		
0		

Calculate environmental values from Bill of Materials

Then, in the 'Product information' tab, the 'Density' field becomes available. This can be entered according to the table below, depending on the selected product type in Madaster:

Product Type in Madaster	Density filled in as:
Volume product (m3)	Kilogram/m3
Surface product (m2)	Kilogram/m2
Length product (m)	Kilogram/m
Quantity product	Kilogram

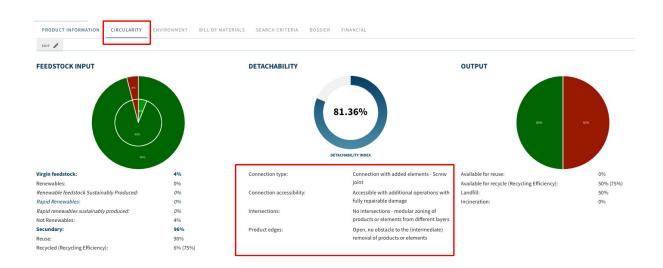
3.1.6.2 Calculate environmental values from Bill of Materials

When adding a composite product (main product with a sub-product in the bill of materials) in Madaster, the user can select the option 'Calculate environmental values from Bill of Materials' in the 'Product information' tab. This automatically calculates the environmental values based on the environmental values in product composition.

PRODUCT INFORMATION	CIRCULARITY	ENVIRONMENT
SAVE 🗈 CLOSE 🗙	-	
GENERAL		
Product name *		
Туре		
Volume		
Product code		
GTIN		
Functional lifespan (years) O		
Do not use Bill of Materia	ls Calculations	
Calculate environmental	values from Bill of	Materials

3.1.6.3 Detachability parameters by product (Circularity tab)

In the product's 'Circularity' tab in Madaster, the user can enter several detachability parameters: connection type, accessibility of the connection, intersections and product edges inclusion).



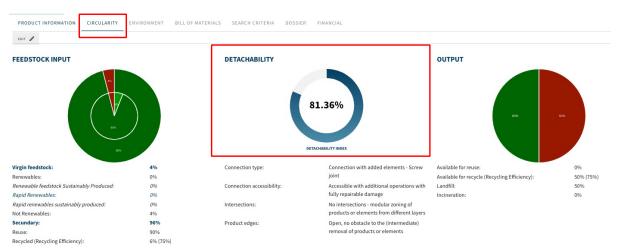
These parameters represent the way in which the product should be installed in the building, according to the manufacturer's/manufacturer's guidelines.

If an element in a building source file (IFC/Excel) does not contain detachability parameters and during the matching process in Madaster is linked to a product, then the element will inherit the detachability parameters from the product in Madaster.

If an element in a source file (IFC/Excel) does contain detachability parameters and during the matching process in Madaster is linked to a product, the detachability parameters entered in the source file will be taken over.

3.1.6.4 Detachability index of product

The Madaster platform calculates and displays a detachability index (percentage) of the added product based on the detachability parameters defined at product level. This score is based on the revised uniform measurement method for detachability (see section 3.1.2.2).



The detachability index at product level can only be calculated and displayed if all four parameters have been entered.

3.1.7 Add external link in Dossier

In addition to source files and general files, it is now also possible to add an external source (URL) to the "Dossier" tab (on various levels) in Madaster. This link can be added if relevant build data is available on an externally accessible website.

ADD FILE

File type * External link	•
Name *	URL*
Select folder * Dossier	

3.2 API

Three functions have been added to the public API with which images on the buildings can be managed. These APIs are:

GET	/api/v3.0/building/{id}/images Get the buildingImages	∨ 🗎
POST	/api/v3.0/building/{id}/images Adds an image to a building	✓ [↑]
DELETE	/api/v3.0/building/{id}/images/{fileName} Deleted an image from a building	 ✓ [⊥]

3.3 Bug fixes

The following bugs have been resolved:

- Excluding 'ifcCovering' type in the import process is not supported.
- Uploading source files with # character in the naming gives an error.
- Deleting account database gives error.
- Database can be deleted even though it contains materials/products.
- Enrich again function does not match sub-elements.
- Shared database is visible in invited party navigation.
- Article code of added product in Madaster is not visible in "Building" tab.
- Elements of archived building are not visible in the Enrich tab.
- Unable to remove invited but unregistered users.Newly added folder is not immediately visible in navigation.

4.1 New functionalities

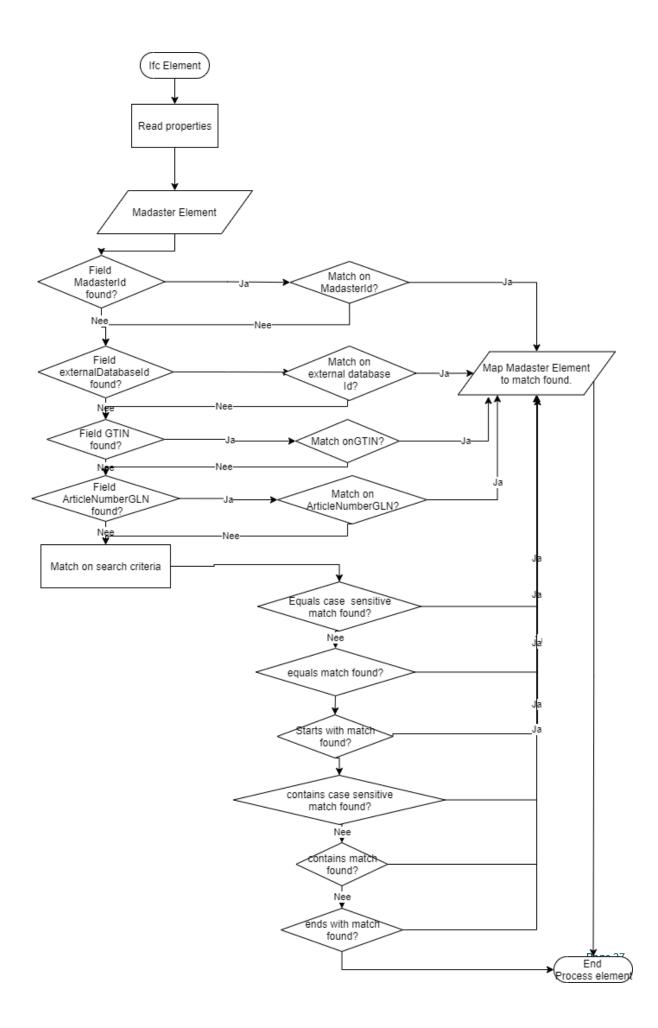
4.1.1 (NL) NAA.K.T. material naming added as search criteria

This is a further specification of the agreements in the BIM Basic IDM in the Netherlands about material descriptions in the form of unambiguous material naming and according to a fixed order: Name_Attribute_Application (in Dutch abbreviated: NAA.K.T.). In this release, the NAA.K.T material names are added as search criteria to the materials of the "Madaster" dataset. As a result, if an element in a source file (IFC/Excel) contains a NAA.K.T material name, it will be automatically recognized and linked to a corresponding material in the "Madaster" dataset.

OOFHOUT - ESS	EN					
0071001 - 233						
MATERIAL INFORMATION	CIRCULARITY	ENVIRONMENT	SEARCH CRITERIA	DOSSIER	FINANCIAL	
EDIT D						
Search criterium			Matching type			Language
Ash			Contains			All langu
Essen hout			Contains			Dutch
Bois de frêne			Contains			French
Legno di frassino			Contains			Italian
Madera de fresno			Contains			Spanish
Eschenholz			Contains			German
Asketre			Contains			Norwegia
hout_essen_						Dutch

4.1.2 Extension matching

Besides search criteria, the matching mechanism in Madaster has been expanded. With this release it is possible to match on (1) External Database Ids, (2) GTIN and (3) Product Code (whether or not in combination with GLN). The process of element happens as follows:



4.1.3 Extension Madaster Excel upload template

In addition to IFC source files, the Madaster platform can also read building data from a standardized Excel upload template. The new version of the Madaster Excel upload template has been extended with the following four columns:

- (1) GTIN (EAN)
- (2) Article number
- (3) Madaster Id
- (4) External database ID.

1	В	C	D		E	
GTIN	ArticleNumber	Madaster Id	💌 External Database Identifier	~	Material/Product	-

The Madaster Excel upload template can be downloaded in any building's dossier (Dossier >> Upload button).

ADD FILE

		-
	Are you using Excel? Then use this template.	
•		
	•	

These additional data fields are read in Madaster as follows:

Excel	Madaster Element
GTIN	GTIN
ArticleNummer	ArticleNumberGLN
MadasterId	MadasterId
External database-Id	externalDatabaseId

4.1.4 Extension Madaster Property set (IFC)

To support the expansion of the matching options, the Madaster Property set (a set of properties in which certain IFC properties are bundled) has been extended with new data fields, being:

Propertyset	Dataveld	Madaster Element
Pset_Madaster	externaldatabaseId	externaldatabaseId
Pset_Madaster	GTIN	GTIN
Pset_Madaster	ArticleNumberGLN	ArticleNumberGLN

In case the Madaster property set is present on an IFC element, and these data fields are filled in, then these values are used within Madaster (and reading data fields from other property sets is skipped).

4.1.5 Extension Madaster IFC import properties

As a result of the expansion of matching options, the existing Madaster IFC import function has been expanded.

IFCv2.3:

Propertyset	Dataveld	Madaster Element
Pset_ManufacturerTypeInformation	ArticleNumber	ArticleNumber part of ArticleNumberGLN When ArticleNumber is 8, 13 or 14 characters long also GTIN.
Pset_ManufacturerTypeInformation	Manufacturer	Manufacturer part of ArticleNumberGLN
Pset_ManufacturerTypeInformation	ModelReference	When ArticleNumber data field is empty:
		ArticleNumber part of ArticleNumberGLN

IFCv4:

Propertyset	Dataveld	Madaster Element
Pset_ManufacturerTypeInformation	GlobalTradeItem Number	GTIN
Pset_ManufacturerTypeInformation	ArticleNumber	ArticleNumberpartofArticleNumberGLNWhenGlobalTradeItemNumberdatafieldisemptyandArticleNumber8,13orArticleNumber8,13or14characters long also GTIN.

ManufacturerTypeInformation	Manufacturer	Manufacturer ArticleNumberGLN	part	of
ManufacturerTypeInformation	ModelReference	When ArticleNumbe empty:	r data	field is
		ArticleNumber ArticleNumberGLN	part	of

4.1.6 Expansion of Environment tab

The existing "Environment" tab, available at product level, has been further expanded with several new fields. In addition, users (mainly product manufacturers) have the option of entering the LCA phase details for their product(s) per compliance (for the environmental performance of construction products based on the environmental life cycle analysis).

PRODUCT INFORMATION CIRCULARITY	ENVIRONMENT BILL OF MATERIALS SEARCH	CRITERIA DOSSIER FINANCIAL	
SAVE 💽 CLOSE 🗙			
Dataset owner		Dataset type	
Reference year		Environmental Cost Indicator	e
Dataset valid until year		Enter LCA phase details	
Compliance EN 15804	*		

These environmental data can now also be entered per impact category.

EN 15804:2012-04+A1 201	3														^
IMPACT CATEGORY	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Potential 100 years (kg CO2e)															
Ozone Deplation Potential (kg CFC11e)															
Photo Chemical Oxydant Formation (kg C2H4e)															

4.1.7 Removing duplications in material naming (IFC source file)

While reading a source file (IFC/Excel) into Madaster, the platform attempts to link each element to a material or product in one of the selected Madaster datasets. It does this based on the material description. If an element in an IFC file contains an exact duplicate material description (e.g. 'steel_reinforced, steel_reinforced'), Madaster recognizes that it concerns one and the same material. In that case, the platform will be able to automatically link this element to a material in the selected data sources (provided that the material is available in the selected data sets).

4.1.8 Extension filter 'Unit dimension' (Enrich tab)

On the existing 'Enrich' tab, the 'Unit dimension' filter has been extended with the option "No dimensions". By choosing this option, in the Enrich screen, all top elements without geometric properties are displayed in the relevant source file (IFC/Excel).

100%						
FILTER O	N					
Elements	tatus	~				
Element	Element calculation					
IFC-type	IFC-type					
Floors	~					
Building	~					
Classifica	Classification methods					
Layers of	brand	~				
Unit dime	nsion	^				
	No dimensions	83				
0	Length	0				
0	Area	0				
0	Volume	0				

4.1.9 Change of column naming in Madaster Excel upload template

In the new version of the Madaster Excel upload template, the name of the column 'Building layer' has been replaced by 'Floor'.

E		F			G
Material/Product	▼ (Classification	-	Floor	-

4.1.10 Add product images

The existing 'Product Information' tab, available at product level, has been extended with the option to add one or more product images. These images (fileformat jpg and png) may be max. 5MB each.

PRODUCT INFORMATION CIRCULARITY ENVIRONMENT SEARCH CRITERIA FINANCIA	L
GENERAL	
Product name *	Description 🚟
Type* Volume	
Product code	Product Images

4.1.11 API

The following adjustments have been made:

• A new API has been added to enable activating multiple building files at once. Previously you had to enable a single file and then poll until the file was activated before activating another.

POST /a	api/v3.0/building/{id}/batchactivate Acti	vate multiple files on a building
Parameters		Try it out
Name	Description	
<pre>id * required string(\$uuid) (path)</pre>	The building identifier	
(pacity)	id - The building identifier	
Request body		application/json 🗸
Example Value	Schema	
["3fa85f64-:]	5717-4362-b3fc-2c963f66nfa6"	

4.2 Bug fixes

The following bugs have been resolved:

- Uploading and displaying images at folder type level (including portfolio, region, etc.).
- IFC matching on property "type name" in Madaster now also works for sub-elements of compound elements (and not solely for top elements).
- Select option 'Overwrite values for the use of raw materials' is only available on product (in tab 'bill of materials') when a material is added. This option is no longer shown on material.
- Tags (search terms) are also copied when uploading a new version of the IFC file.

5.1 New functionalities

5.1.1 Define owner label on folder type for use in materials passport.

Admin users can activate and define a text label on a folder type (portfolio, region, etc.) representing its owner.

This label can be filled in at the folder level. Both label and entered value will be displayed on the front page and general page of the materials passport.

Specify owner in passport			MADASTER	E2E TEST GEBOUW
Owner label in passport Building owner				
	-	J		BUILDING OWNER
				Housing corporation Green Path

5.1.2 Multiple classification methods per building

Ability to upload and display source files (IFC & Excel format) with different classification methods (which are supported by the platform) on one building has been added. Previously, only one classification method could be chosen at the building level.

	Name	Size	Classification method
	190326 Demomodel ARC22-Bouwkundig.ifc		
	IFC file generated by GRAPHISOFT ARCHICAD-64 22.0.0 NED	34MB	NL-SfB
0 -400	FULL Macintosh version (IFC add-on version: 5009 NED		
	FULL).; IFC2X3		
EB	MaterialImportTemplate_Shearing layers_TEST_INFRA.xlsx	28KB	Shearing
t and	Microsoft Macintosh Excel (16.0300)	2010	layers
ක්ෂ	MaterialImportTemplate_Omniclass_TEST_RG.xlsx	52KB	Omniclass
E IZ UB	Microsoft Excel (16.0300)	52KB	Omniciass

5.1.3 New classification method: NL-SfB table 1 V201912

For the Netherlands, update 2019-12 of the NL_-SfB Table 1 classification has been made available on Madaster.



5.1.4 Improvements to vendor and verified database accounts

In Madaster it is possible for manufacturers to add their building materials and products in their own database including underlying sub-databases. In addition, it is now possible for admin users to invite users with read and / or management rights to these databases. Finally, the function has been added to copy materials and / or products between the own supplier databases.

5.1.5 Material Passport enhancements

The following items have been changed in the Madaster materials passport (both PDF and Excel file):

- On the cover page, the fields "Publisher" and "Owner" have been removed.
- On the "General" tab, the "Portfolio Name", "Portfolio Owner" and "Indicative MPG" fields have been removed. Empty fields are also hidden.
- In the section "Active source files" the fields / columns "classification methods" and "export date" have been added.
- If a building layer (e.g.,' Structure, Skin, etc.) contains no source data, this will be indicated textually on the pages "Building Materials" (text: "no material data found for this layer") and "Building Products" (text: "There are no products in this layer") of the materials passport.

5.1.6 Visual adjustment Circularity tab

On the Madaster "Circularity" tab, the visual representation of the CI Building Score and Madaster CI Score is reversed. Logically, the CI Building score is now displayed on the top line and the corrected Madaster CI score below.



5.1.7 API

The following changes have been made:

- The POST (create) / PUT (update) method for building have changed:
 - the field classificationType has been deprecated.
 - new field buildingUsageOtherDescription is added to enable a description for the other category
- The POST (create) method for buildingfile is extended with a new field classificationTypeId. This field tells the system which classification (nl-sfb/ebkp/omniclass/etc) the file uses.

5.2 Bug fixes

The following bug has been fixed on the platform:

- Visual representation of percentages in pie charts on page "Source file quality" is not always shown correctly (page is not automatically refreshed).
- Generation of materials passport (pdf): progress indicator remains active even though materials passport is ready.
- Display of composite elements (assembly) is shown in "Enrich" screen to only 1 sub-level.
- Building archive: link to the building is missing in the breadcrumb.
- The tiles on the home page of a private account will lead to a "Page not found" message on the page.
- Lifespan of a product in the database is limited to 1000 years.

6.1 New functionalities

6.1.1 Expansion of matching types within the search criterion material / product

In Madaster it is possible to add a material and / or product in your own database, which can be used in the matching process. Search criteria can be used to automatically link this "own" material / product. Within a search criterion, two new matching types have been added, namely:

- **Contains (Case sensitive)** extension of "Contains" matching the values that contains the exact criteria including casing (lower/upper).
- **Equals (Case sensitive)** extension of "Equals" matching the values which are equals to the criteria including casing (lower/upper.)

ADD CRITERION



Examples

Matching Type	Criteria	Value	Is a Match?
Equals	ABS	abs	\checkmark
Equals	ABS	ABS	\checkmark
Equals	ABS	Abs	\checkmark
Equals	Abs	abs	\checkmark
Equals	Abs	ABS	\checkmark
Equals	Abs	Abs	
Equals (case sensitive)	ABS	ABS	

Equals (ca sensitive)	case	Abs	ABS	×
Equals (ca sensitive)	case	ABS	abs	×

6.1.2 Possibility to override the default (based on building usage) demolition and dismantling costs.

The Financial module of the Madaster platform provides insight into the financial (residual) value of materials used in a building. Specific costs such as demolition and dismantling costs are used in the calculation. Until now, these demolition & dismantling costs based on the building usages were not visible to the end-user on the building. In this release, default the demolition and dismantling costs have been made visible on edit of a building and there is a new possibility to override these.

Usage* Semidetached	
Override the demolition costs (default: 26 EUR/m ²)	
Override the demolition costs (default: 69 EUR/m ²)	
Demolition costs 72 EUR/m ²	

7.1 Bug Fixes

The following bug has been fixed on the platform:

- Folder overview page: navigating to a subfolder leads to a Page not found.
- Product/Materials search criteria: the label for equals criteria was wrong equals (Case sensitive) instead of Equals.

8.1 New features

8.1.1 UI improvements

On the financial tab the bar charts have a mouse over displaying the values.

8.1.2 New classification method "Shearing Layer"

If a customer uses none of the classification available for that country in Madaster, it is now possible to just use a simple code to directly map the elements to the proper shearing layer of Brand.

8.1.3 New Button "Public Data" on building (NL only)

To support future functionality to ask consent to be able to use building data with a specific license within a location boundaries.

PUBLIC DATA CONSENT
This object can be included in the open data sets below. Select the sets in which the object should be included. No public data areas available for this object.
CANCEL

8.2 Bug Fixes

The following bug has been fixed on the platform:

- Percentage on the financial tabs where not properly displayed. (100% instead of 1%).
- Excel passports: material column names are missing when displaying products.

9.1 Bug Fixes

The following bug has been fixed on the platform

• When language settings are German or French, the databases list do not show material and/or products in chosen language but English.

10.1 Bug Fixes

The following bug has been fixed in the Public API

• Error when creating a buildingfilelement containing a materialId.

This release contains the following items:

11.1 Expansion material & product fields

In Madaster it is possible to add materials and / or products. In this release, a number of new tabs have been added at both material and product level and existing tabs have been changed in terms of design and content.

11.2 Addition of "Environment"-tab

In line with the guidelines from Platform CB'23 and to support producers / manufacturers in adding the necessary product data fields to comply with Environmental Product Declarations (EPDs) and to generate product passports, this release delivers for materials and products in Madaster a new tab, namely the 'Environment' tab.

			_	
PRODUCT INFORMATION	CIRCULARITY	ENVIRONMENT	SEARCH CRITERIA	FINANCIAL

This is in line with the <u>Bepalingsmethode Milieuprestatie Bouwwerken (</u>environmental performance assessment method); the calculation method for determining the environmental performance of construction works during their entire lifespan, based on the EN 15804 standard.

In addition to environmental information (such as Environmental Cost Indicator and NIBE classification), this new 'Environment' tab in Madaster contains the environmental impact categories (incl. toxicity) as in force in the European standards:

• EN 15804/A1:2013 ("set 1") en

SET 1 Global Warning Potential 100 years 0	kg CO2e	SET 1 - TOXICITY Human toxicity potential 0	kg 1,4-Dichlorobenzene
Acidification potential of land and water 0	kg SO2e	Freshwater aquatic ecotoxicity potential O	kg 1,4-Dichlorobenzene
Eutrophication potential 0	kg (PO4) ³ e	Marinewater aquatic ecotoxicity potential 0	kg 1,4-Dichlorobenzene
Photo Chemical Oxydant Formation 0	kg C2H4e	Terrestrial ecotoxicity potential 0	kg 1,4-Dichlorobenzene

• EN 15804/A2:2019 ("set 2").

SET 2		SET 2 - TOXICITY	
Global Warming Potential Total		Potential Incidence of disease due to PM emissions	
0	kg CO2e	0	
Global Warming Potential Fossile		Potential Human Exposure Efficiency relative to U235	
0	kg CO2e	0	kBq U235-eq
Global Warming Potential Biogenic		Potential comparative toxic unit for ecosystems	
0	kg CO2e	0	CTU-e
Global Warming Potential Land use and Land use change	kg CO2e	Potential comparative toxic unit for humans - cancerogenic	CTU-h
0	kg CO2e	0	010-11
Ozone Deplation Potential		Potential comparative toxic unit for humans - not(ncancerogenic	
0	kg CFC11e	otential comparative toxic unit for numans - not(incancerogenic	CTU-h
*		*	
Acidification Potential Accumulated Exceedance		Potential soil quality index	
0	mol H+e	0	
Eutrophication Potential Fresh Water			
0	kg PO4e	Toxicity: Contains materials that are on the Cradle-to-cradle banned list of chemicals?	
		Unknown	
Eutrophication Potential Marine Water	kg Ne	○ Yes	
0	ng ne	O No	
Eutrophication potential terrestrial		-	
0	mol Ne		
Photo Oxidant Creation Potential			
0	kg NMVOCe		
Abiotic Deplation Non Fossile			
0	kg Sbe		
Abiotic Deplation Fossile	MJ		
0	LIMI		
Water Use Deprivation Potential			
Water Use Deprivation Potential 0	m³e depr.		
-			

11.2.1 Addition of "Circularity"-tab

PRODUCT INFORMATION	CIRCULARITY	ENVIRONMENT	SEARCH CRITERIA	FINANCIAL

In line with the guidelines from Platform CB'23, a new tab has been added in this release at both material and product level, namely the 'Circularity' tab. It displays and further specifies existing "Feedstock input" and "Output" (waste scenario) sections (now available under the "Material Information" or "Product Information" tab) on a separate tab.

FEEDSTOCK INPUT					
VIRGIN FEEDSTOCK : 100%					
0% Renewables					
0% Renewable feedstock Sustainably Produced					
0% Rapid Renewables					
0% Rapid renewables sustainably produced					
SECUNDARY: 0%					
Reuse					
0	%				
0% Subcomponents reused					
0% Reuse					
0% Recycled (0%Recycling Efficiency)					

OUTPUT

CHECKLIST REUSABILITY

The fastenings are accessible and the product can be removed without removing/damaging other parts of th building					
The product can be disassembled with standard (hand) tools without damaging the product or products attached to the product					
The fastenings and assembly method of the product is standardized and pre-manufactured					
0% Reuse of sub components					
0% Available for reuse					
0% Available for recycle (0%Recycling efficiency)					
0% Landfill					
100% Incineration					

A new section has also been added for "Scarcity".

o critici i i	
0% Exhaustion Risk	
0% Socioeconomic scarce	

11.2.2 New product identification fields

In preparation for entering product information (by producers / manufacturers) in Madaster and subsequently being able to automatically match these products with elements in source files (IFC / Excel), the number of product identification fields has been expanded in this release.

In addition to "product code", the fields "GTIN" and "EAN" are now also available separately and the Madaster system also automatically validates whether elements in source files contain this coding. If this is the case, the Madaster system will be able to automatically match such an element to the corresponding product in the Madaster database.

Product code

GTIN EAN

11.2.3 New fields for product origin

In preparation for entering product information (by producers / manufacturers) in Madaster, a number of specific <u>manufacturer</u> and <u>production site</u> fields have been added in this release.

MANUFACTURER	PRODUCTION SITE
Name	Name
Website	Website
Street	Street
City	City
Zipcode	Zipcode
Country	Country
GLN	GLN

11.3 Upload new version of a source file which preserves existing mapping.

The Madaster platform offers users the possibility to read source files at different times during the life of the building. So far, there was no specific functionality to upload a new version of source file. Therefore, the files had to uploaded and mapped as a completely new source file. This release introduces a new feature that allows users to upload a new version of a source file in Madaster preserving previously mapped materials/products.

Instead of the usual upload procedure, this function starts via the upload icon (in Dossier tab) that is located behind the version of the source file to be replaced.



Subsequently, the regular upload process steps must be followed. The system will process the new IFC file and, if a unique element occurs again and is linked in the previous IFC file, will maintain this relationship. Ultimately, only one version of the source file can be activated in the building dossier. By activating the most recent version, the system will automatically deactivate the old (replaced) IFC file.

11.4 Platform improvements

Madaster strives to implement improvements in the platform on a continuous basis. If necessary, this is carried out by means of hotfixes. The improvements below have been implemented in the platform as part of this release.

11.4.1 Add complete product in enrichment process.

The Madaster platform offers users the option to add a new material or product and / or copy an existing material or products (and modify it) during the "Enrich" process (manually linking elements in the source file (IFC / Excel) to materials and / or products). Certain material / product information (including search criteria and bill of materials) could not be entered directly in this process. In this release, the user is offered the option, if desired, to enter all relevant material or product data directly in the "Enrich" step.

11.4.2 Financial dataset representation (material)

When adding a new material in the Madaster platform, the user can, if desired, select a financial dataset in the material tab "Financial". The selected dataset is then used to provide insight into the

*MADASTER

financial (residual) value (at material level) in the Financial module of the Madaster platform. Previously, if a user did not select a financial dataset, it was not immediately visible that the system assigned an alternative (so-called "fallback") financial dataset (linked to the Madaster material classification) to the new material. In this release, this is modified so that this "fallback" dataset is also displayed in the material's "Financial" tab.

11.4.3 Other bug fixes

- When adding a new material and / or product, a check is now performed per database to see whether the search criteria used are unique. If a material and / or product is deactivated, the relevant search criteria are automatically removed to ensure that these search criteria do not become unjustifiably unusable.
- When adding an "Area" product (m²) in Madaster, the minimum height has now been adjusted, so that products with a height of less than 1 cm can also be added.
- Changes to the material name are now also immediately visible in the product tab "Bill of Materials", if the material is part of one or more products in Madaster.
- The interface of the vertical navigation drawer (left side of the screen) is immediately refreshed when executing the function "move building" (in user's own folder type structure).