Multi-Model Classification
COS PIM

Version 7.1

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Content

1   Introduction

This manual describes the option *Multi-model classification*. By default, COS uses the ETIM Dynamic classification system to record technical product information. However, other classification systems can be used as well as older ETIM-versions, which are sometimes preferred (such as for the German market).

Multi-model classification was developed to allow for classification of products in multiple, concurrent classification systems. This option allows for classification of product data according to multiple classification standards, including:

Classification system	Holder	Website
ETIM Dynamisch	Ketenstandaard	https://www.etim-international.com
ETIM-version (6, 7, 8, 9, etc.)	Ketenstandaard	https://www.etim-international.com
eCl@ss	eCl@ss	https://www.eclass.eu
EMCS	Format	https://www.formatsoftware.de/en/electronic-customs-clearance/emcs
EZ-base	EZ-base	https://ez-base.nl/en
GPC	GS1	https://www.gs1.org/standards/gpc
EPREL	European Commission	https://eprel.ec.europa.eu/
Q Model	MagiCAD	https://www.magicad.com/
Custom	System defined by customer	-

Multi-model classification is most often used with classification in multiple ETIM-version, for example classification both in *ETIM Dynamic* and *ETIM 9*. This process is explained in detail in APPENDIX A: MULTI-MODEL CLASSIFICATION (ETIM-VERSIONS).

1.1   Concepts

COS
Compano Online Software.

Multi-model classification
Multi-model is the option to use multiple classifications models to classify product data.

Classification model
A classification model is a (hierarchically) structured set of product classes, used to describe the technical data of products. The model usually comprises of product groups, classes, features, values and units. A classification model is sometimes also known as a Classification System.

ICS-table
The *Installation Classification Structure* table is a database table containing the structure of a classification model. An ICS-table is sometimes also known as a Master File (Dutch: stamtabel).

ETIM Dynamic
ETIM Dynamic is the default classification system present in COS

ETIM-versions
ETIM regularly 'freezes' their classification system, at which point no further changes are added to this ETIM-version. ETIM-versions are identified by a number, such as ETIM 7, ETIM 8, ETIM 9, etc.

BMEcat 2005 - ETIM Guideline 5 (BMEcat 5)
BMEcat5 is a standard for electronic data transfer by electronic catalogues created and published by the Bundesverband Materialwirtschaft, Einkauf und Logistik e. V., the German association for materials management, purchasing and logistics (BME). BMECat5 is a XML-based data exchange format.

EPREL

3

The European Product Database for Energy Labelling (EPREL) has been set up under EU Regulation 2017/1369, to provide important *energy efficiency information* to consumers. It is a *legal requirement* for suppliers(manufacturers, importers or authorised representatives) to register products on EPREL before placing them on the EU Market.

2 Multi-model setup

Important: Multi-model classification is available as an *additional COS-module*. Should you wish to use multi-model classification, please contact sales@compano.com for information on options and pricing.

The ETIM Dynamic classification model is available by default. For other classification models to become available, an *Installation Classification Structure (ICS-table)* needs to be set up for each model to be added. This is usually done be either importing an XML-file or setting-up the classification structure manually or with Excel imports. This setup is usually handled by a Compano consultant, however ETIM-versions can be imported quite easily.

With multiple classification systems present, a product can be *classified in multiple systems*. This means that one product can have several classes, each belonging to a different classification system. To identify to which system a class belongs, the system is recorded in a separate data field. Underlying product models, features, values and units inherit the classification system record from the product class to which they belong.

2.1 Master files

A classification system is recorded in a *master file (stamtabel)*. This master file records the *structure* of the classification system in question.

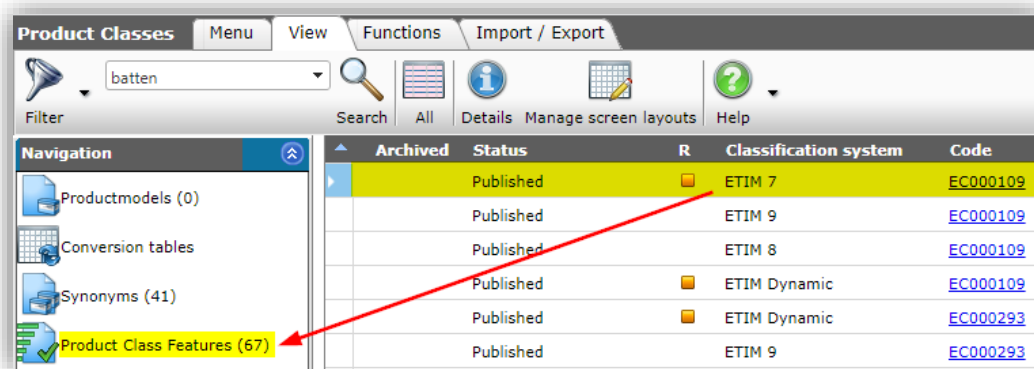### 2.1.1 ETIM Dynamic, ETIM10, ETIM9, ETIM8 and ETIM7

The master files of ETIM Dynamic and ETIM-versions such as ETIM10, ETIM 9, ETIM 8, and ETIM 7 overlap: product classes of each ETIM-version are recorded separately, however they all use the same underlying features, values and units.

Of course, between ETIM-versions there can be differences in the number of features used, values to choose from or a newer ETIM-version can contain classes which were not present in earlier versions.

Example
ETIM 7 class EC000109 contains 67 features – Figure 1.
ETIM Dynamic class EC000109 contains 73 features – Figure 2.

1. ETIM 7 class EC000109 - 67 features

2. ETIM Dynamic class EC000109 - 73 features

2.1.2 GPC, eCl@ss, EZ-Base, EMCS, Q-model and EPREL

Some other classification systems, such as GPC, eCl@ss, EZ-Base, EMCS, Q-model and EPREL, make use of their own, exclusive master file or other means of describing the classification system. This means that for the classes in these system only the features, values and units of their own system are available, however additionally the ETIM features and values are always available.

2.1.3 Custom system

Another option is to devise your own classification system in cooperation with a Compano consultant. Please contact sales@compano.com for options and pricing.

2.2 Cross-system classification

Multi-model classification has been programmed with the option for cross-system classification in mind. This means that the records of different classification systems share the same data table which allows for interchangeable use of class features, values and units.

For example
An *eCl@ss* product class could belong to a *GPC* group, contain a *EMCS* class feature, and use an *EZ-Base* unit with a *Qmodel* value.

Note: Currently, not all classification systems allow for cross-system classification; the option is only available for GPC and QModel:

- GPC: both GPC- and ETIM master records are available
- QModel: both QModel and ETIM master records are available

In practice that means that when creating for instance a Qmodel class you can (re-)use ETIM features and attributes and units, but the features and values specifically needed for Qmodel can be added.

3 Multi-model classification

This sections describes the implementation and use of multi-classification.

3.1 Add classification systems

Once the multi-model module has been added, additional classification systems will be added by the Compano consultant. However, should you need another ETIM-version, then these can be readily imported; see the next paragraph.

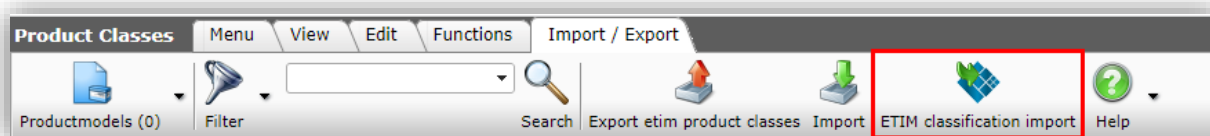### 3.1.1 ETIM-versions[1]

ETIM-versions can be added manually:

1. First, go to the ETIM International website > *Model releases:*
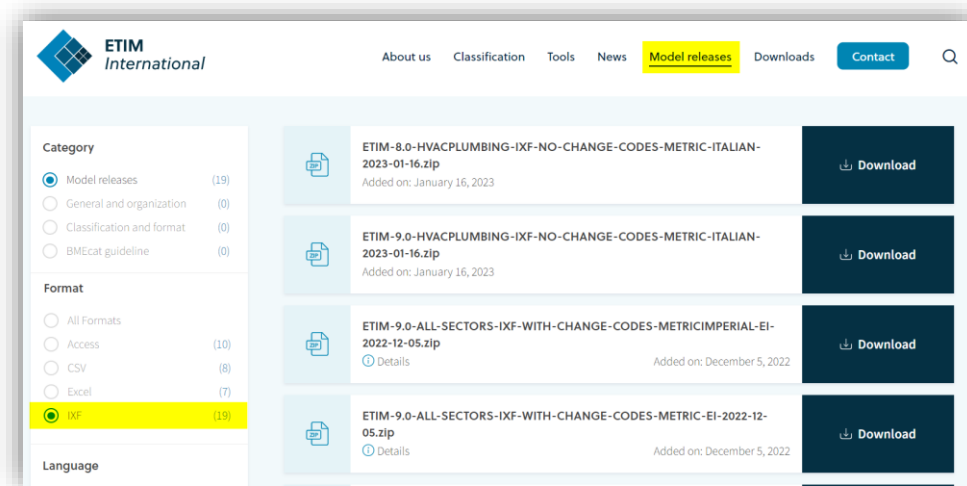
2. Use the Filters in the left side panel to find the specific model you need and make sure to also filter on the *IXF-format.*

   Note: The 'no change codes' version is preferred, as this will lead to a cleaner classification interface in COS.

3. Select the model version, download the IXF-file and unzip it.
4. Next, in your COS environment, through the Menu go to *ETIM > Product Classes* and on the *Import/Export* tab click on *ETIM Classification Import:*

5. In the pop-up window:

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[1] Note: ETIM Dynamic is available by default and automatically updated weekly (each Sunday).
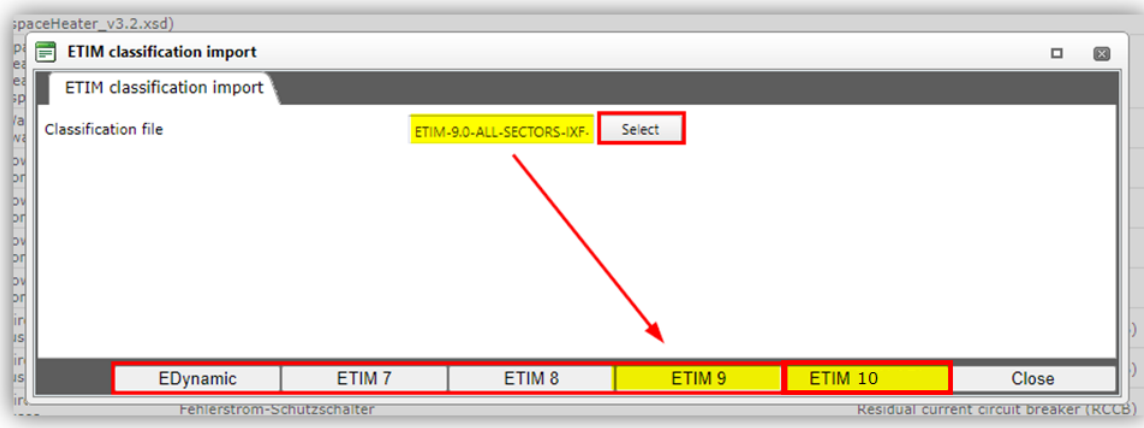
      a.   Classification file: Select the unzipped IXF-file (XML)

6.   Next, click on the corresponding ETIM-version button. use either the ETIM 7, ETIM 8, ETIM 9 or ETIM 10 button to import the classification system. Make sure to use the button that corresponds to the ETIM-version that you downloaded (!)

Note: The ETIM IXF-file only contains English translations; should your COS application only have the Dutch language available, note that the English translations will be entered into the Dutch language fields (!). This will probably be corrected during the weekly ETIM update, whereupon the Dutch translations will be added.

Note: Class descriptions of older ETIM variant will currently[2] *not* be updated.

3.2   Multi-model classification

Multiple classification systems allow for multi-classification of your products. Multi-classification is always handled from the *Product classifications* screen.

> *Multi-model classification can be used with all types of classification systems. However, in the remainder of this manual only examples of classification in multiple ETIM-versions will be shown.*

3.2.1   Set standard classification system

Per environment, a standard classification system can be set[3]. This standard determines which classification system will be shown as the *default classification system* on the *Select Classification* button, for instance:
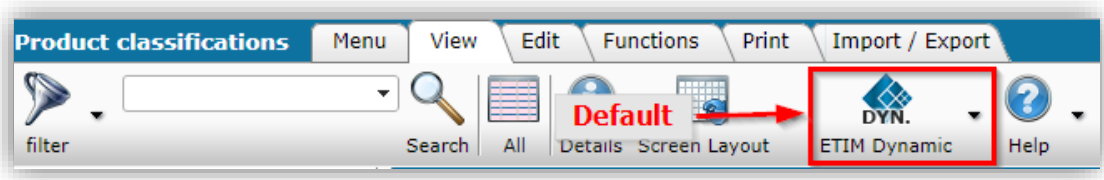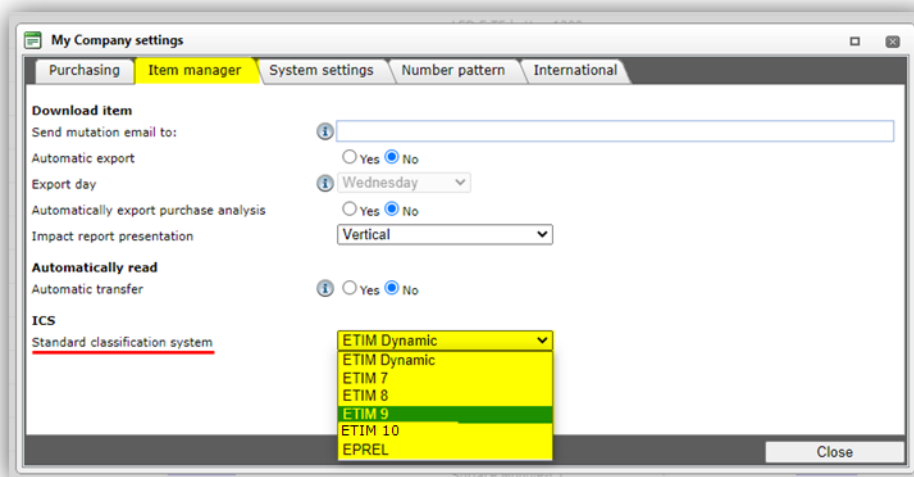

To set the standard classification system:

1.   On the *Menu*-tab go to *My Details > Compano Settings*
2.   In the pop-up window, to the *Item Manager* tab:

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[2] 3-2-2023
[3] Only classification systems for which product classes have been defined/imported in your COS-environment, will be available.

   a.   Standard classification system: Select the default classification system.

The active classification system will be reset to this default every time a user logs off.

3.2.2 Classifying in other systems

To classify a product in a *different classification system*, go to *Menu > Products > Product classifications > View tab a*nd select the system[3] you want to use for classifying your data, for instance *ETIM 10.*
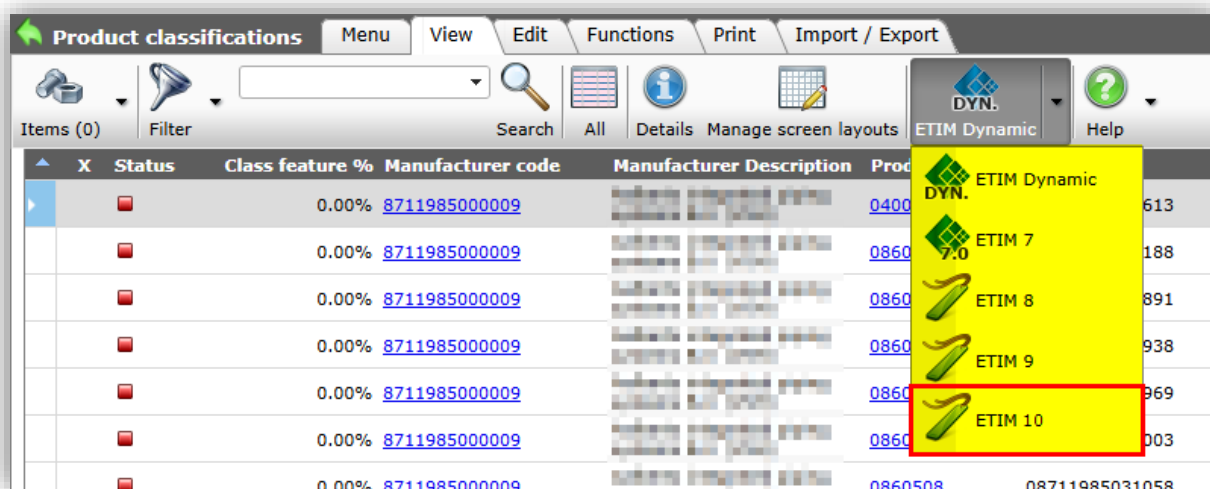
After selection of the classification system, classification data *for this active classification system* is shown for each product:
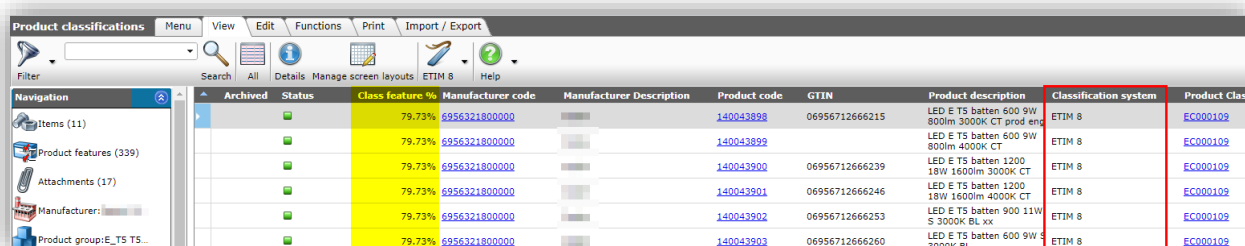
By selecting a classified product and clicking on *Product features* in the left side panel, any filled out features for this class are shown.

Note: This may include any features of other classification systems (versions) that are shared with this class:


Tip: Redundant features that are, for instance, left over from an earlier classification in a different class, can be removed. For more information, see paragraph 3.5 REMOVE FEATURES

3.2.3   Filter on classification system

When using the Filter on the Product classification overview, please note the following:

When the Filter is set to `Product Class = Empty` *and a different classification system is selected, make sure to re-apply the filter to again show all products of which the Product Class is empty.*
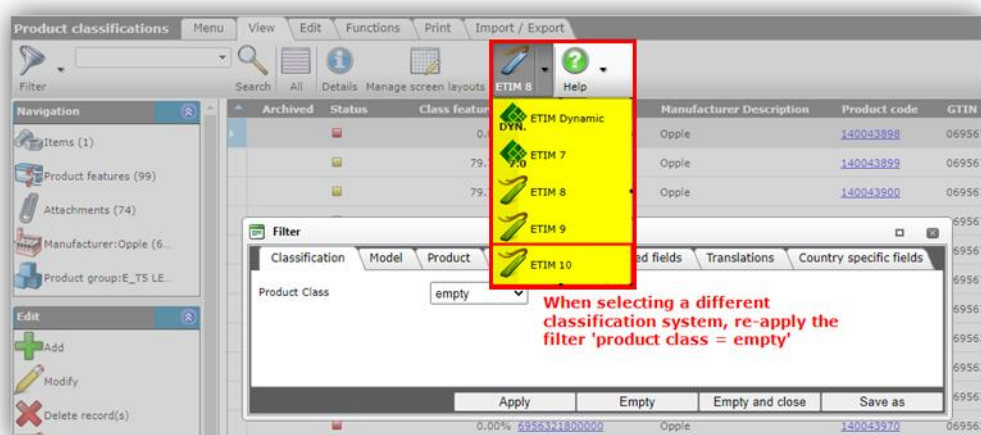
3.3   Product class code

For each classification system a product can have a product class assigned; so a product could have *multiple classes*, one for each classification system that was imported. This is why each class can have a product class *per* classification system:

3. Product 140043899 in multiple classification systems (ETIM Dynamic, ETIM 8, ETIM 7 and EPREL)

Tip: To see if a product has been classified in multiple systems, simply set a Filter to select a range of similar products, for instance `Batten Luminaire`, and check the Quick Filter option *Assigned Classes*.

By comparing the number of Filter results (26) to the Assigned Classes, it becomes apparent that Batten products have been classified as:

- EPREL LightSource (20)
- ETIM 7 EC000109 Batten luminaire (24)
- ETIM 8 EC000109 Batten luminaire (24)

- ETIM Dynamic EC000109 Batten luminaire (23)

From the example above, it can be tentatively concluded that most likely all 23 current Batten luminaire products have also been classified in ETIM 8 and 7, and that 20 out of 23 current Batten luminaire products have also been classified in EPREL.

3.4   Copy classification

The function *Copy classification* is used for *copying existing classification data* from one ETIM-version to another. For instance, if your data has been classified using ETIM Dynamic, you can use this function to copy the classification data to the ETIM 7, 8 or 9 version.
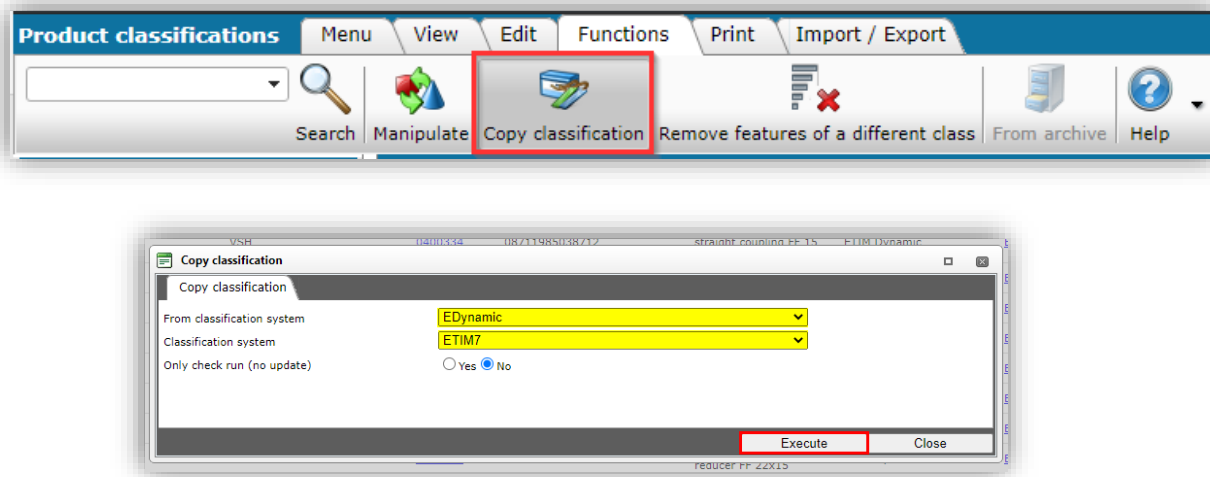
Important: Only classification data that *fits both systems* is copied; this means that after copying you will probably have to do some post-classification for any features or values that were not copied.

3.5   Remove features

Sometimes a *new, better-fitting class* will be introduced in a classification system. This new class often shares a lot of features with the older, original class. This means, that when switching a product to this new class, many features will already be filled out. However, note that when switching a product to a new class, **any features that were present in the original class, but are not used in the new class will 'linger'. Should you decide that these 'lingering' features are no longer need, they** can be removed using the *Remove features of a different class* function:
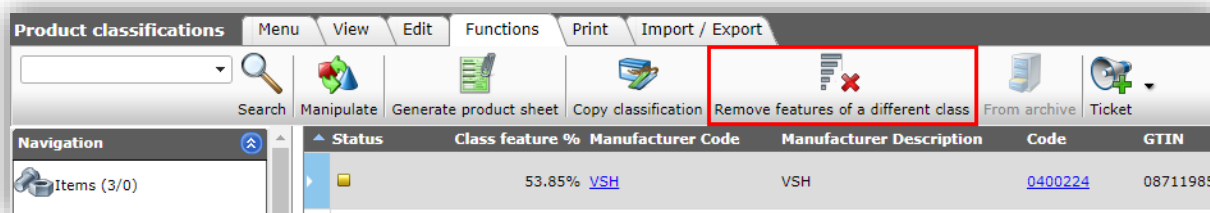
In the pop-up window, select from which (original) classification system the features can be removed:

11
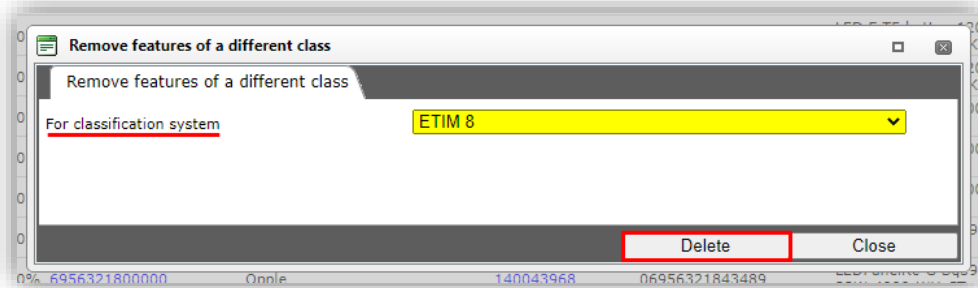
3.6   Select ETIM-units in other classification system

As ETIM-units (metre, joule, kilowatt hour, etc.) are very comprehensive, most times ETIM-units can be used with other classification systems, such as EPREL. However, when a unit is not present in ETIM, it can be added to the classification system.

Example
The unit Kilojoule per day does not exist in ETIM. It can be added to the EPREL system:
1. Through the Menu, go to *Classification > Units*:
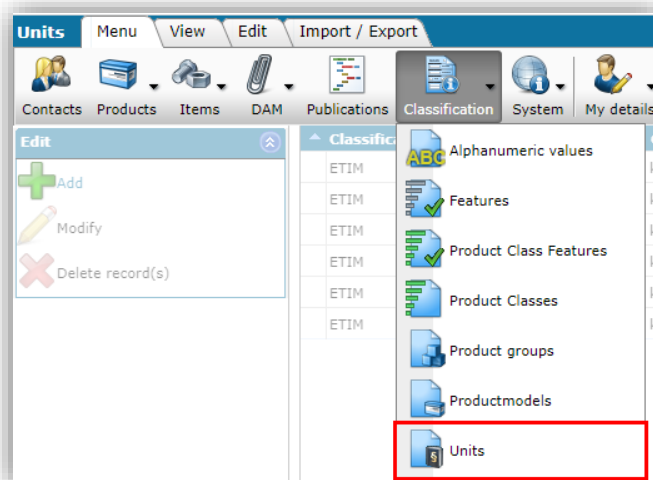
2. Under Edit, click on *+Add*.
3. In the pop-up window:

a. Classification system: Select the classification system, for instance **EPREL**.
b. Code: Enter a code for the new unit.
c. CU: Enter the correct unit code, for instance `kJ/day`.
d. Description: Enter a description for the new unit.
4. Save the record.

3.7 Classifying a product with User Defined Fields

You have the option to map a *User-defined field* to a classification field. This way, the value of the user-defined field will be used to fill out the classification field. Note that user-defined fields can be mapped to data fields of multiple classification systems. This kind of setup can possibly save you a lot of work.

For a more detailed explanation see the manual *Mapping User-defined Fields* which is available from the Compano Help website.

4 Appendix A: Multi-model classification (ETIM-versions)

For the Dutch market, the default classification system *ETIM Dynamic* is used. However, should you need to export your data in a different format, for instance *DQR* for the German market, then you will also need to classify your products using an fixed ETIM-version, as in the German market the ETIM Dynamic system is not used.

This example describes how to classify your products using one or more ETIM-versions, under the assumption that the ETIM Dynamic system was used for the initial classification. The procedure for multi-model classification then consists of the following steps:

- Add ETIM-version to your PIM-system (if not already available).
- Copy classification from ETIM Dynamic to ETIM-version. Note**: Other copy scenario's might be applicable**, depending upon your situation; for more information, check with your Compano consultant.
- Post-classification: Add any classification information that is missing in the fixed ETIM-version.
- Remove classification data; any superfluous classification data can be deleted.

As an *alternative* to copying classification, make use of the ETIM UP conversion tool, see paragraph 4.8 ETIM UP CONVERSION TOOL.

4.1 ETIM versions

Within ETIM multiple versions of an *ETIM class* exist:

- ETIM Dynamic: Most recent, dynamic version of the class, which can be amended weekly.
- ETIM 10: Most recent[4], fixed version of the class.
- ETIM 9, 8, 7, 6, etc.: Older versions of the class.

However, ETIM Features and ETIM Values are 'version independent', in the sense that the same ETIM feature or value can be in use in multiple versions of ETIM classes.

- ETIM Dynamic always contains *all* ETIM information, including (expired) classes, features, values that have been filled out for other ETIM-versions.
- An ETIM-version contains features and values that are valid for that version only.

For example

| 140043900 | 06956712666239 | ETIM 8 | EC000109 | Batten luminaire | 44 | EF000004 | Protection class | II |
| 140043900 | 06956712666239 | ETIM Dynamic | EC002892 | Ceiling-/wall luminaire | 60 | EF000004 | Protection class | II |

ETIM feature EF000004 is used by both ETIM 8 and ETIM Dynamic

In practice, this means that often ETIM data can be *copied* between ETIM-versions. Where versions differ, for example because an ETIM feature or value has been added or removed, the classification data must be completed. This process is called *post-classification*.

4.2 Add ETIM-version

Beside ETIM Dynamic, Compano usually offers multiple ETIM-version. Should an ETIM-version not be available in your COS application, you can download the version from the ETIM website and import the classification XML-file into COS.

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[4] 30-1-2023

For detailed instructions, please see paragraph 3.1.1 ETIM-VERSIONS.

Note: To be able to classify in multiple ETIM-versions, you will need the multi-classification module. Please contact sales@compano.com for more information on optional modules and pricing.

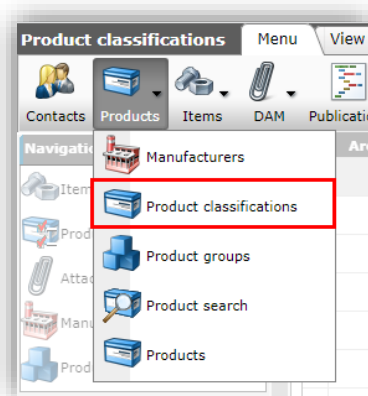## 4.3   Copy classification

When your ETIM Dynamic classification data is (fairly) complete and you need to classify in a fixed ETIM-version also, the preferred strategy is to *copy your classification data* from ETIM Dynamic to the most recent fixed ETIM-version. As differences between ETIM Dynamic and the most recent fixed ETIM-version are minimal, this will ensure that a substantial portion of your classification data can be copied and only minimal *post-classification* is needed.

However, depending upon your situation, other copy-strategies might be preferred:

- Up-down strategy: This strategy is useful when, at some point, you copied your ETIM Dynamic classification data to a fixed ETIM-version and already performed post-classification. For instance, you copied your data to ETIM 8, post-**classified, and now need to 'upgrade' to ETIM 9. The best** strategy for this situation is to first copy classification from ETIM 8 *up* to ETIM 9 and then *down* from ETIM Dynamic to ETIM 9. This will ensure that all your post-classification work from ETIM 8 will be copied to ETIM 9, and that any newer (better) data will be copied from ETIM Dynamic.
- Temporary older class: When an ETIM class has been redefined, such that is has been replaced by a newer class, then it might be more efficient to first set products to this expired class and then copy the classification. This will ensure that any existing classification data from the expired class that also fits the new class will be copied.
- ETIM UP: As an alternative to copying, you can make use of the *ETIM UP conversion tool*. This tool will make use of predefined mapping rules to convert your classification data from an older to a newer ETIM-version. However, you can only convert one class at a time. For more information, see paragraph 4.8 ETIM UP CONVERSION TOOL.

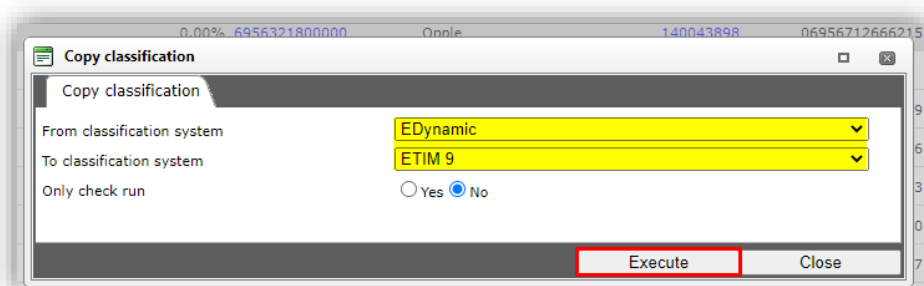To copy classification data from ETIM Dynamic to a fixed ETIM-version:

1. Through the Menu, go to *Products > Product classifications*:

2. Select all products for which you need to copy classification data, and, on the Functions tab, click on *Copy Classification*:
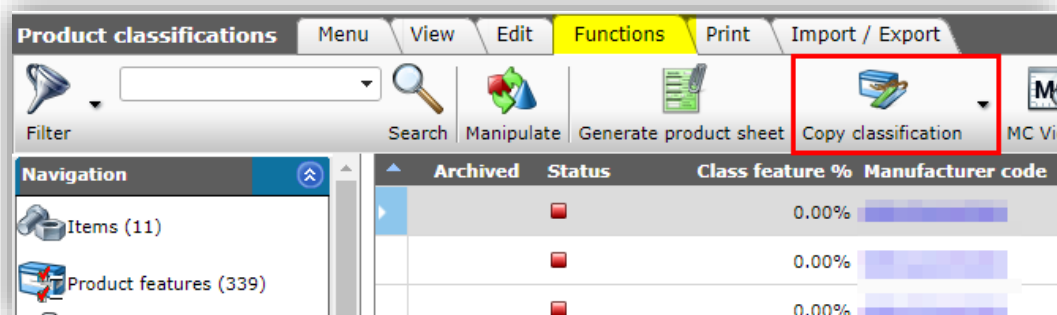
3. In the pop-up window:

   a. From classification system: Select the classification system from which you will copy the data, for instance `ETIM Dynamic`.

   b. To classification system: Select the classification system to which you will copy the data, for instance `ETIM 9`.

   c. Only check run: Optionally set this to `Yes` to perform a check run. No actual data will be copied, however you will receive a detailed report including any possible warnings and/or errors, as if the copy-action had run.

4. Click on *Execute* to start to copy process. <u>Note</u>: This may take a long while; you can check the progress of this action through *Menu > System >Background tasks*. If the execution takes to long, the report will be sent to your e-mail address:
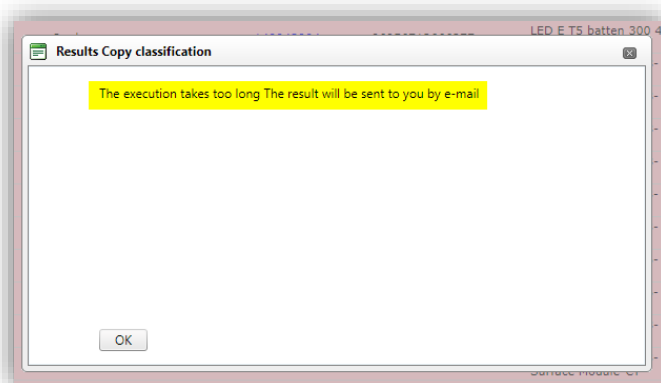
4.4 Post-classification

Once the classification is copied, it is necessary to check the classification state of products. When copying from ETIM Dynamic to an (older) fixed ETIM-version, some class features or values cannot be copied as this feature or value did not yet exist. The same holds true for copying from one fixed ETIM-version to an older or **newer version. Additionally, any 'older' features or values that are expired in the** fixed ETIM-version where **you copied from, will be 'empty'.**

Thus, when copying classification, it will be necessary to add any missing classification data. As newer features often replace an older feature, their information can be used to fill out the older feature. This is why, during the copy process, this information will be preserved.

This will be apparent from the ETIM Product Features overview:

Classification system	Product Class	Product Class	Sequence number	Feature	Feature	Alphanumeric value	Value
ETIM Dynamic	EC010225	Multi-layered pipe, smooth	1	EF023863	Material inner layer	EV000139	Plastic
ETIM 7	EC010225	Multi-layered pipe, smooth	1	EF023863	Material inner layer	EV000154	Other
ETIM 7	EC010225	Multi-layered pipe,	2	EF020756	Quality class inner layer	EV022187	PE-MD

Note: Sometimes ETIM removes an entire class. In that case, the product will remain *class-less* in the classification system where you copied to.

4.5   Remove data of other classification

Some features or values of the ETIM-version you copied from, will not be available in the ETIM-version you copied to. These features/values will still be linked to the (class) version you copied from. In the example below, the value `Plastic` did not exist in ETIM 7.

Classification system	Product Class	Product Class	Sequence number	Feature	Feature	Alphanumeric value	Value
ETIM Dynamic	EC010225	Multi-layered pipe, smooth	1	EF023863	Material inner layer	EV000139	Plastic
ETIM 7	EC010225	Multi-layered pipe, smooth	1	EF023863	Material inner layer	EV000154	Other
ETIM 7	EC010225	Multi-layered pipe,	2	EF020756	Quality class inner layer	EV022187	PE-MD

You can use this older data for post-classification; see previous paragraph. However, once this 'left-over' data is no longer necessary, it can be removed:
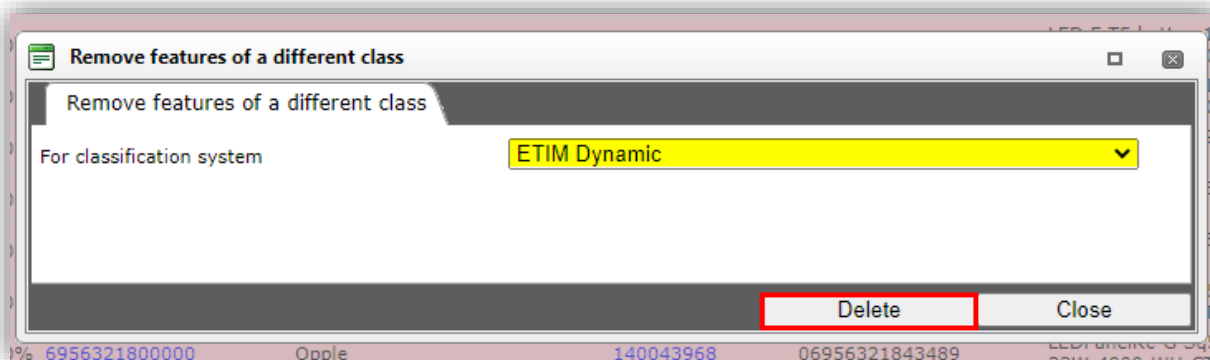
1. Through the Menu, go to *Products > Product classifications*.
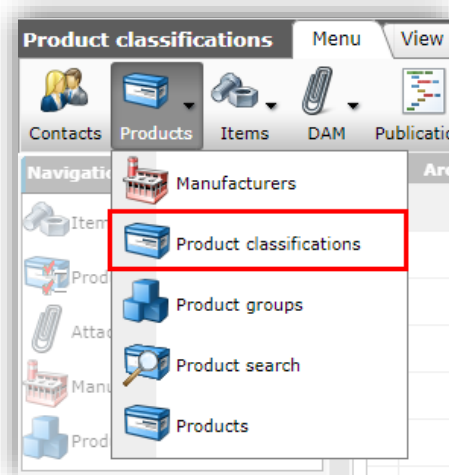
2. Select all products for which you need to remove 'lingering' classification data, and, on the Functions tab, click on *Remove features of a different class*.
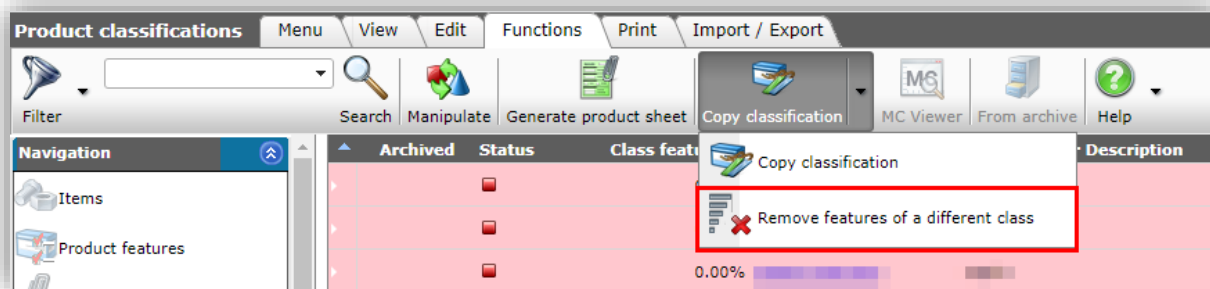
3. In the pop-up window:

    a. For classification system: Select the classification system for which you need to remove 'lingering' feature data.

4. Click on *Delete*, to start the removal process.

4.6 Tips & tricks

Some tips and tricks that might be useful are discussed in this paragraph.

4.6.1 Copy between ETIM-versions

In some cases it is more practical to copy classification of one version to another, instead copying from ETIM Dynamic. For instance, when in the past you copied from ETIM Dynamic to ETIM 8 and already executed post-classification, filling out all missing classification data.

In this case, copying classification directly from ETIM 8 to ETIM 9 as much of the post-classification data will be copied through to ETIM 9 thus saving you a lot of time. Some additional post-classification will still be necessary.

4.7 UDF-mapping to ETIM

When user-defined fields (UDFs) are mapped to ETIM fields, then additional work needs to done after copying classification data, as the mapping of UDFs is *not* copied.

Three options are available:

1. Either, map all user-defined fields to the (new) ETIM-version. Note: Mapping to multiple ETIM models is possible.
2. Or, export all classification data in the DICO format and hack the resulting `Productdata.xml`; by changing the ETIM-version number in this file. The classification data can then be imported back into COS.
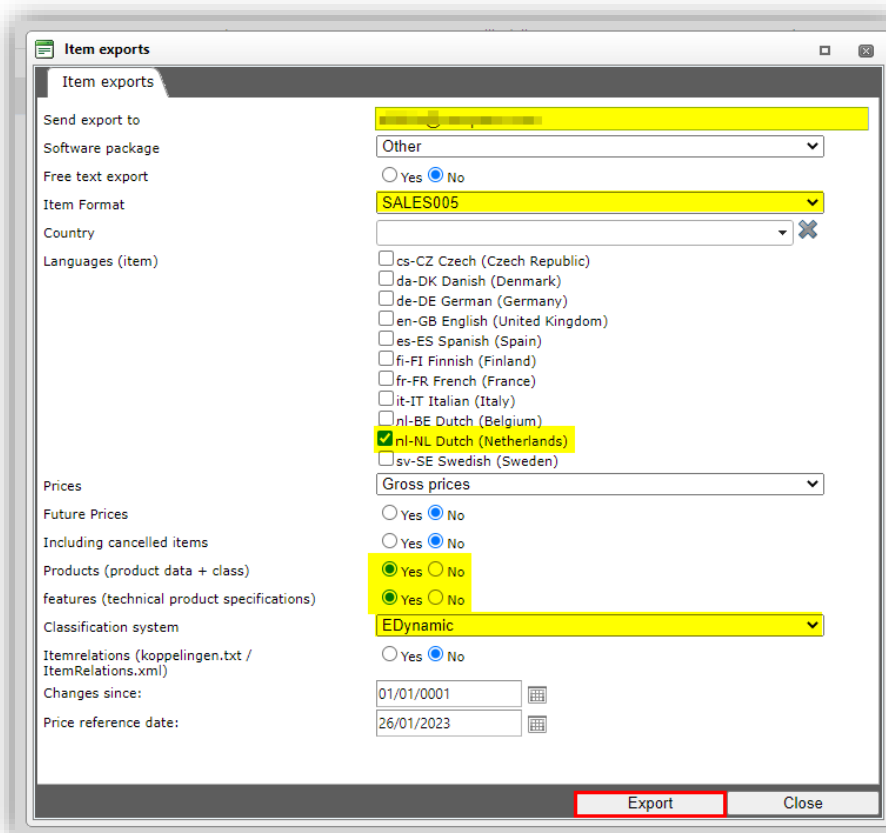3. Or, use the ETIM UP CONVERSION TOOL.

4.7.1 Import hacked classification data

The procedure for the second option is as follows:

1. Through the Menu, go to *Items > Assortments*
2. Select the Assortment and, on the Import/Export tab, click on *Item exports*.
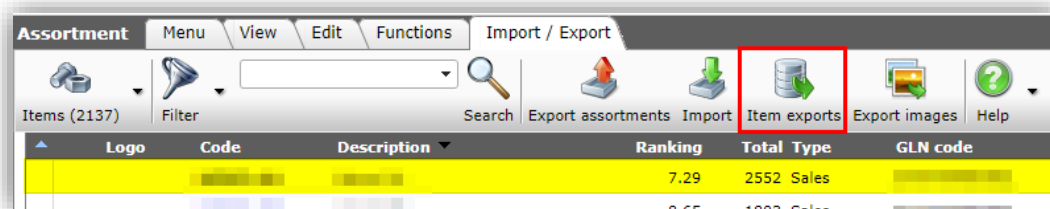
3. In the pop-up window:

    a. Send export to: Fill out your e-mail address.
    b. Item format: Select the **SALES005** format.
    c. Languages (item): Select at least one language.
    d. Product (product data + class): Set to **Yes**.
    e. Features (techical product specifications): Set to **Yes**.
    f. Classification system: Set to **EDynamic**.
4. Click on *Export*.

From the e-mail that you receive, download the attached SALES005 file and unzip it:

1. From the unzipped SALES005 export, open the **ProductData.xml** file in a text-editor (for instance Notepad):
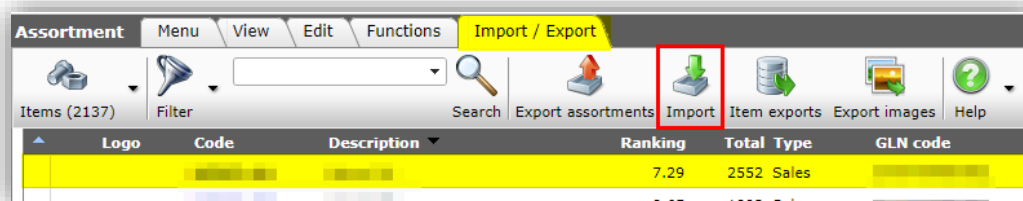
2. Change the ETIMVersion to, for instance, `ETIM-8.0`:

3. Save the file.
4. Zip all 3 XML-files that you extracted, using any kind of ZIP-application, for instance:
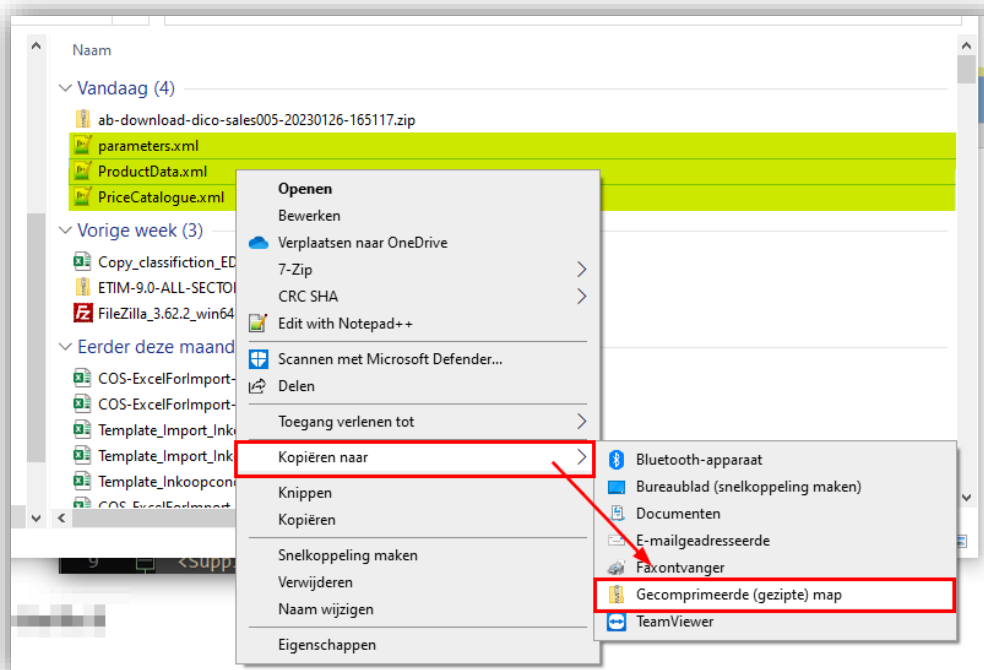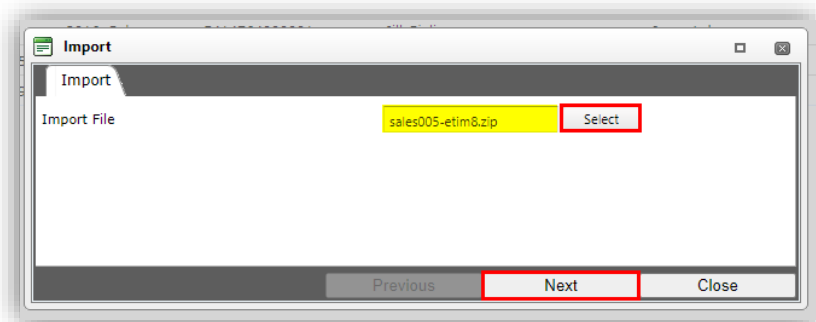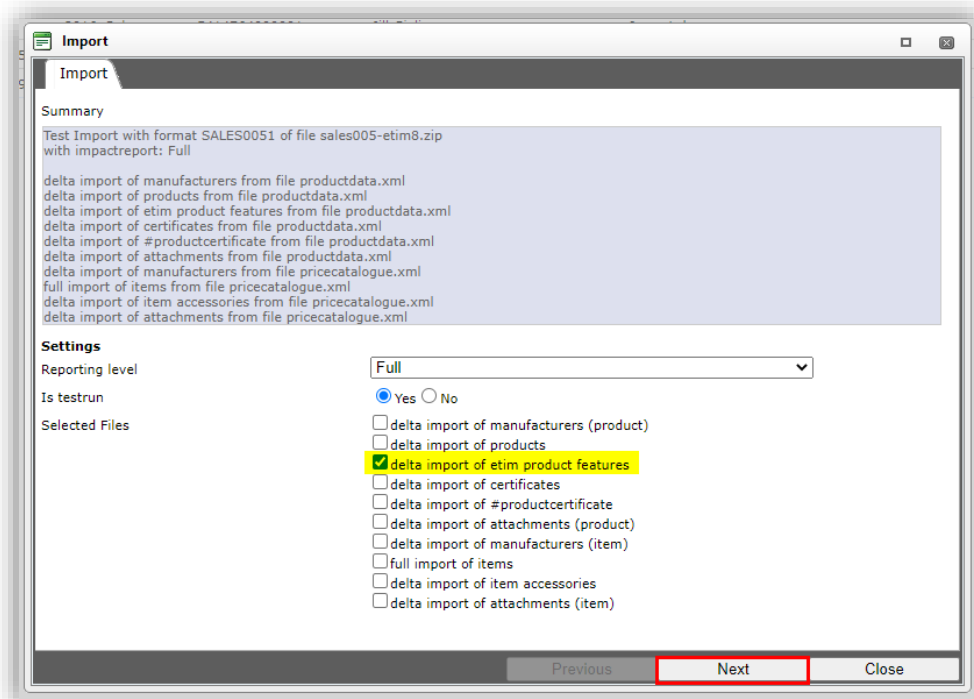

Now, import the newly zipped file into COS:

1. On the Import/Export tab, click on *Import*:

2. In the pop-up window:

     a.   Import file: Select the ZIP-file you made.

3.   Click on *Next* (depending upon the number of Items in your file, this can take a few minutes):

     a.   Reporting level: Set this to `Full`.

     b.   Is testrun: You have the option to first perform a test run which will report any errors, but *not* save any data to COS. Set this option to `No` to actually perform the import.

     c.   Selected files: Make sure to only select the option `delta import of etim product features`.

4.   Click on *Next* to start the import.

This option is a quick alternative for copying classification where user-defined fields are mapped. This way, at least the classification data is copied, however should you wish to continue with adding ETIM-version data, for instance for newly added products, then the only valid option is to also map the user-defined fields to this ETIM-version.

4.8   ETIM UP conversion tool

ETIM International offers a conversion tool, ETIM UP, that allows for data to be easily converted from an older to a newer version of ETIM. The tool is primarily intended for manufacturers. Updating in ETIM UP takes place on the basis of established mapping rules, which determine the relationship between the old and new version of the classification. The mapping rules are fixed once for all classes, attributes, and attribute values

for ETIM 6.0 to ETIM 7.0., ETIM 7.0 to ETIM 8.0. and from ETIM 8.0 to ETIM 9.0. ETIM UP can also be used for the dynamic publication.

Currently[5], the mapping from ETIM 6.0 to ETIM 7.0 is available to non-participants. The mapping from ETIM 7.0 to ETIM 8.0 and the mapping from ETIM 8.0 to ETIM 9.0 and the mapping from ETIM 9.0 to ETIM 10.0, and from ETIM 9.0 to the dynamic publication is only available to ETIM participants.

<u>Note</u>: ETIM International also provides a comprehensive ETIM UP manual.

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[5] 30-1-2023

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