Chesar 2
User manual

Part 6 - Library

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Document History

Version	Comment
Version 2.0	24/10/2012 • Possibility to assign a default description for SDS ES to each determinant value (Section 3.1.2) • Clarification on the Search functionality for determinant types (Section 3.3) • Specifications for waste related determinants in SpERCs (Section 4.1.2.1) • Standard phrase library section added (Section 5) • Guidance on the different use conditions' type related to the ES structure (Annex 1)
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1 INTRODUCTION

User manual 7 describes the different roles for Chesar users. One is **library manager**. The library manager can perform any task within the library. The assessors not having a library manager role cannot access the library in Chesar 2.

The objective of having a centralised library (mainly for the distributed version of Chesar) is to facilitate harmonisation of assessments carried out within a given company. Also the exchange of library elements among users across companies should facilitate the harmonisation and efficiency of assessments.

Harmonisation will in particular be supported if industry associations "create" assessment elements in a Chesar format and make such elements available on their websites to all registrants. This way the single registrants would not need to create all parts of their individual CSAs but will mainly work with imported elements.

1.1 Aim of this document

The aim of this document is to guide the assessor to:

- Understand the determinant-type concept implemented in Chesar
- Understand the purpose of the library within Chesar
- Become familiar with the use of the library implemented in Chesar
- Create objects in the library
- Import objects into and export objects from the library

1.2 Purpose of the library in Chesar

Chesar contains an internal library of objects that are used within the chemical safety assessment process. Such library aims to enable:

- The creation of assessment elements that are necessary for the assessment of substances in a Chesar format
- The re-use of already created CSAs or parts of it.
- Use of standard assessment elements in a consistent way across different assessments
- Support harmonisation in the description of the conditions of use
- The exchange (import and export) of such objects among assessors

When creating the library objects, the definition of metadata is required. Such information is meant to facilitate the management of the library objects, for example enabling automatic pre-selection of relevant objects for a given assessment case or reporting the selected determinants under the appropriate sub heading of the exposure scenario.

⚠ When installing Chesar, the library is empty apart from the determinants needed for the plugged-in exposure tools. It is up to the assessor to populate and manage the content of his own library. Industry sector organisations may decide to make objects for the Chesar library available on their websites.

1.3 Overview on the objects in the library

Three objects are defined for the library so far as characterised below.

1.3.1 Determinant type

In the context of Chesar, a **determinant** is a condition or measure driving the exposure of a substance to man or environment, e.g. the amount of substance used per day at a site, or local exhaust ventilation (LEV) installed at a work place. Determinants can have different characteristics, for example, whether they are quantitative or qualitative by nature, or which route of release/exposure they have an impact on. Determinants can take different values (e.g. the concentration of substance in a mixture, the level of room ventilation or the type of onsite waste water treatment). The determinants relevant for a particular assessment may be pre-defined by the assessment method, and thus the assessor only needs to select the appropriate values for his assessment case. In other cases, the assessor himself may need to select appropriate determinants from the library, or even create new determinant types before he carries out the assessment.

A **determinant type** is a set of information systematically characterising a determinant and defining the values it could take. Once created and ready for use, a determinant type can no longer be modified. If changes are needed, a new determinant type needs to be created (potentially making a copy of the previous as a starting point).

The Chesar library contains by default a set of determinant types that are used in the exposure estimation tools plugged into Chesar: ECETOC TRA workers v3, ECETOC TRA consumers v3 and EUSES.

1.3.2 Specific environmental release categories (SpERC)

SpERCs are used for environmental assessment. A SpERC corresponds to a set of information describing specific conditions of use and the associated release estimates. The SpERC also contains information specifying which processes/activities it covers, so that that an assessor can identify the most appropriate SpERC for his assessment.

SpERCs are typically worked out by downstream user associations in order to describe the typical conditions of use in their sector. This supports the registrants to make realistic assumption on the conditions of use for their assessment. SpERCs can be created with Chesar.

1.3.3 Standard phrase

In order to enable translation into national languages, the information to be communicated via the exposure scenario in the extended safety data sheets (extended SDS) should be communicated in the form of standard phrases. Consequently standard phrases have to be associated to exposure scenario or contributing scenario names as well as conditions of use ("determinant values").

Once a library of standard phrases is available in Chesar the standard phrases can be assigned upfront, when creating a determinant type or a SpERC.

1.4 Status of objects in the library

Certain rules are set ensuring that the integrity of the work carried out by the assessor is kept (i.e. to prevent inconsistencies in the already created assessments). Library objects

- … can be modified while they are being defined
- … cannot be modified once they are ready to be used
- … cannot be modified once they are ready to be exported
- … cannot be modified if they are imported
- … can be removed when they are no longer needed

To ensure the above an object in the library can be assigned to any of three statuses described here below:

- **Finalised**: All library objects for which the **Finalised** check box is ticked are frozen. This means that the content of the object cannot be edited and modified.

> ⚠ There is an exception for finalised determinant types and SpERC. The selection of standard phrases can be modified in already finalised objects.

- **Not finalised**: Any library objects which are not **Finalised** can be modified at any time, but they cannot be used for an assessment nor cannot be exported.

- **Obsolete**: When the **Obsolete** check box is ticked, the object is no longer available when performing an assessment. However, it remains valid in assessments already carried out.

The status of each available object can always be checked in the Library tab.

2 OVERVIEW OF CHESAR BOX 6

2.1 Key terms

The following terms are used within this manual.

Determinant: a determinant is a condition or measure driving the exposure of a substance to man or environment, e.g. the amount of substance used per day at a site, or local exhaust ventilation (LEV) installed at a work place.

Determinants type: a determinant type is a set of information systematically characterising a determinant (including meta-data) and defining the values it could take.

Quantitative determinant: enables the reporting of a condition of use in the form of a numerical value.

Qualitative determinants: enables the reporting of conditions of use in a qualitative way (text description).

RMM with effectiveness: enables the reporting of risk management measures (text description) with a numerical effectiveness value.

SpERCs: Specific Environmental Release Categories (SpERCs) are used for environmental assessments. They correspond to sets of information describing specific conditions of use and the corresponding release estimates (to water, air, soil and waste).

2.2 Main differences with Chesar 1

The general structure of determinant types has not changed. Only for RMM with effectiveness, it is now possible to provide a range of effectiveness so that the assessor could adapt the effectiveness of the measure to his assessment case.

For the SpERC the main structure has remained with a few refinements.

2.3 Window organisation

To activate the functionalities of Box 6, select the 'Library Management' icon from the main icon tool bar (see Figure 1)

Figure 1: Box 6 general view
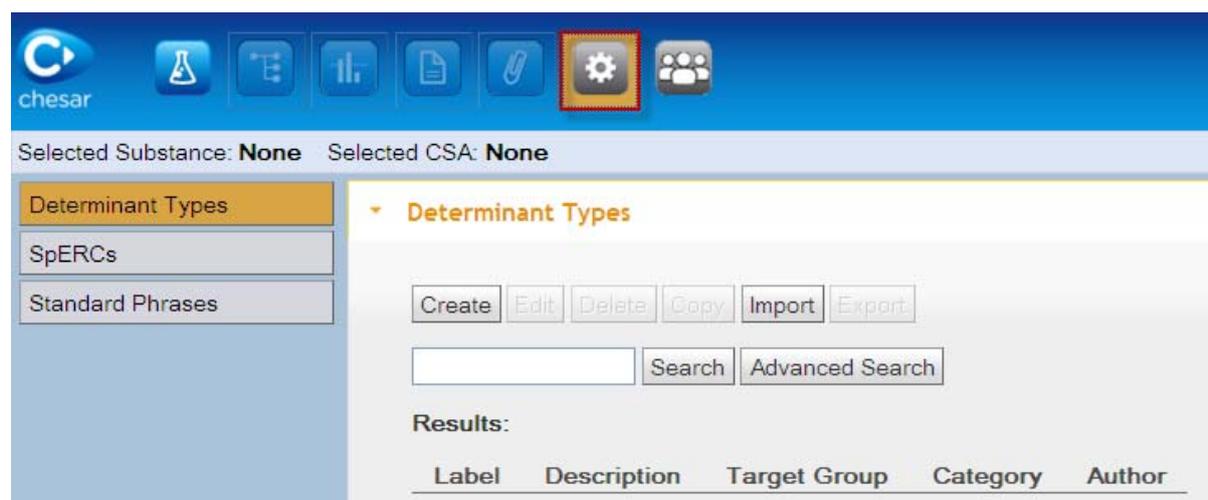
2.4 Overview of Box 6 functionalities

When the **Library Management** icon is clicked, the following tabs are displayed:

- **Determinant Types**: to manage, i.e. search, create, edit, delete, copy, import and export determinants to be used for assessment (see section 3).

- **SpERCs**: to manage, i.e. search, create, edit, delete, copy, import and export specific environmental release categories (SpERCs) to be used for environmental assessment (see section 4).

- **Standard Phrases**: to manage, i.e. search and import Standard Phrases to be used for the Exposure scenario for communication (see section 5).

3 DETERMINANT TYPES

To be able to use a specific determinant in an assessment (see user manual 3) it is necessary that the corresponding determinant type is available in the library.

When selecting the tab **Determinant Types**, you can:

- **Create** a new determinant type

- **Import** determinant types

- **Search** for all determinant types available in the library

- Perform an **Advanced Search** to retrieve a specific subset of determinants

Figure 2: Determinant types pane when no determinant is selected
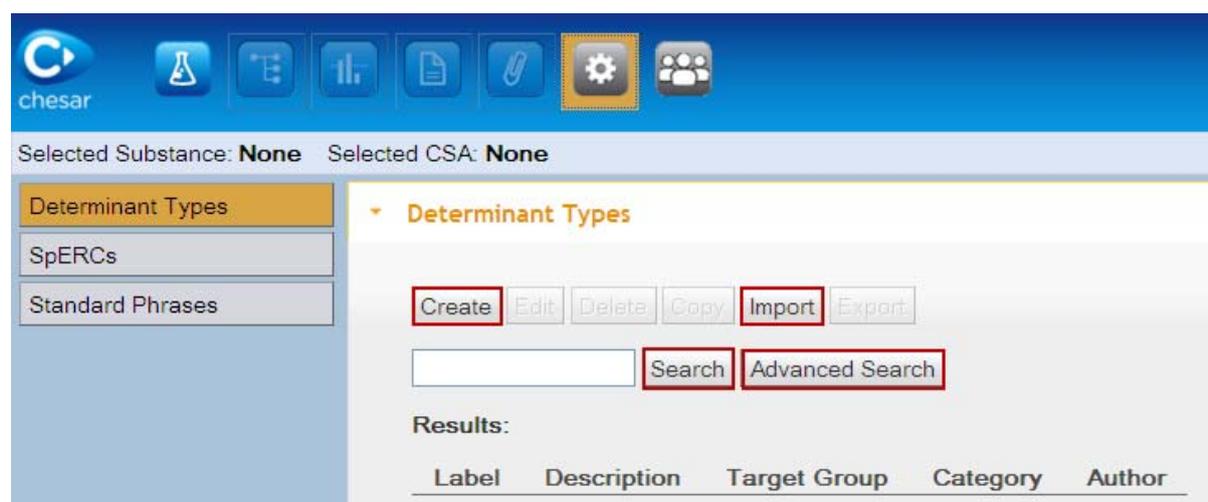
After performing a Search you can select one determinant type by clicking on it. It will then be highlighted in blue.

> ⚠️ If you want to select (or deselect) a set of determinants, hold the Ctrl key while selecting (or deselecting) the desired determinant types.

Once selected you can:

- **Edit** the selected determinant type

- **Delete** the selected determinant type (one or more)

- **Copy** the selected determinant type in order to create a new one

- **Export** the selected determinant type (one or more).

> ⚠️ Chesar 2.1 does not allow the creation or copy of library elements if you have not imported a legal entity and assigned it to the user (see user manual 7)

Figure 3: Determinant types pane when a determinant is selected
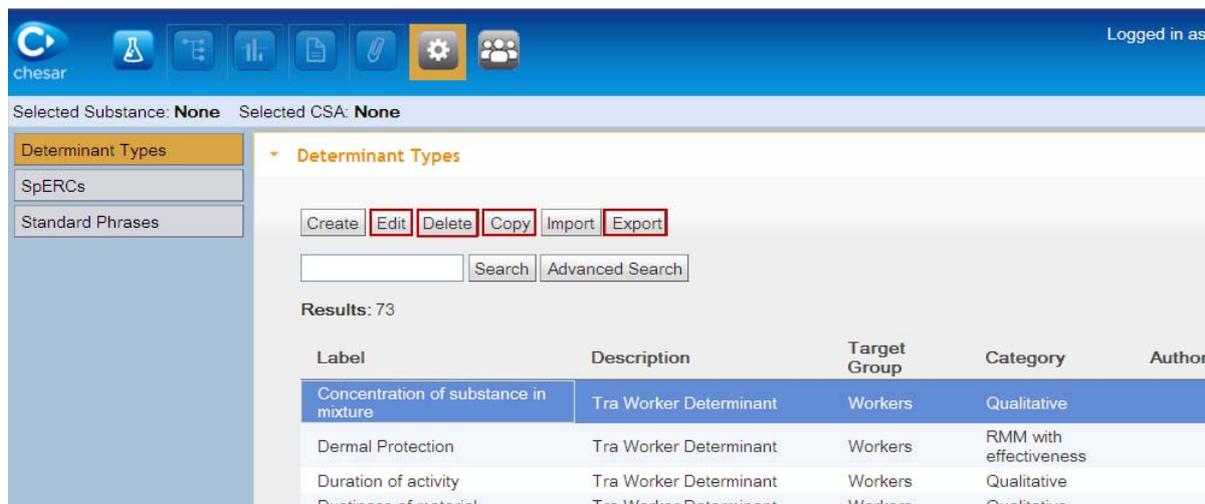
3.1   Create new determinant types

A new determinant type can be created by clicking the **Create** button. A pop up window appears to select a target group and a category for the determinant type (Figure 4).

A single **target group** can be selected for a given determinant type. If the same determinant type should be available for another target group it should be created twice so that a similar determinant type (in terms of content) is created for the other target group. The list of possible target groups is the following:

- Workers
- Consumers
- Environment

There are three possible **categories** for determinant types:

- Quantitative (e.g. amount of substance in a product)
- Qualitative (e.g. dustiness classified as high, medium, low)
- RMM with effectiveness (e.g. LEV for workers or on-site wastewater treatment for environmental assessment, with related effectiveness values).

Figure 4: Select target group and category of determinant type
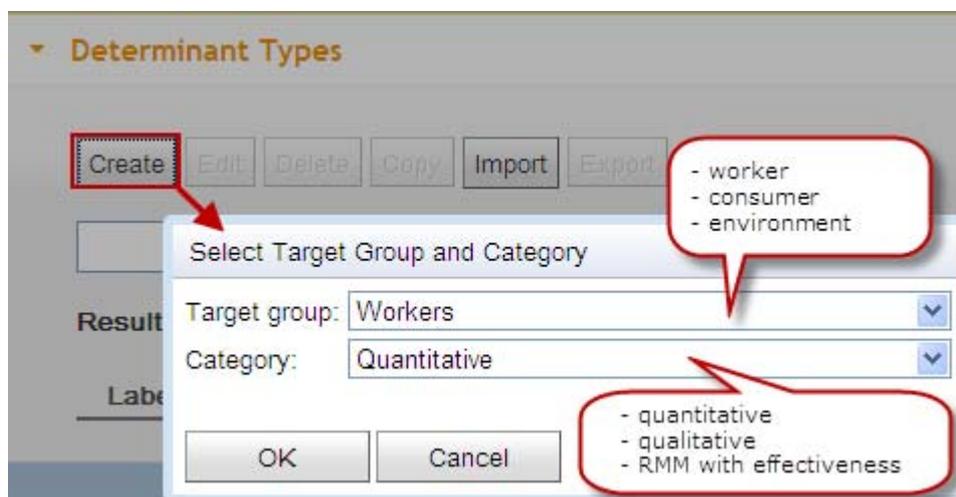
The Create/edit Determinant type dialog (Figure 5) specific to the selected category of determinant and target group appears. The upper part shows generic information, and there are three tabs below to report **general attributes**, **value information** and **administrative information**.

Figure 5: Create/edit Determinant type dialog

The status of the determinant type can be indicated with the two check-boxes below:

- The **Finalised** check box: the definition of a determinant type can be modified until the determinant is finalised. Once a determinant type is finalised, only its standard phrases and obsolete status can be modified. A determinant type cannot be used in an assessment or in a SPERC nor exported until it is finalised.

- The **Obsolete** check box: it is used to set / unset the determinant type to obsolete. An obsolete determinant type cannot be used when performing an assessment. However it remains valid in assessments already carried out. Obsolete determinant types are not retrieved in a simple search, but only in an advanced search. The status of an obsolete determinant type can be set back to not obsolete.

The **Label** is the name of the determinant type. It can be used for searching in the library, it is displayed to the assessor during assessment, and it is reported in the exposure scenario in the CSR. This field is mandatory.

Once the information has been entered, the determinant type may be saved into the Chesar library by clicking on the **OK** button.

⚠️ In case you want to create a new determinant type very similar to another one already created, you can use the **Copy** function (see section 3.7).

3.1.1 Create/Edit General attributes

The following information can be reported under General attributes (see Figure 5):

- **Description of determinant**: Information on the context in which the determinant may be used can be reported here. This is meant to inform the person conducting a

specific assessment for facilitating the selection of the appropriate determinant. It is not reported in the CSR or in the ES for communication.

- **Exposure / Release routes**: set of routes for which the determinant type is valid.

  o When the determinant type is related to **worker** exposure the possibilities are **inhalation**, **dermal**, **eye** (except that eyes cannot be selected for RMM with effectiveness as quantification of reduction of exposure level to eyes by a specific measure is usually not available).

  o When the determinant type relates to **consumer** exposure the possibilities are **oral, inhalation, dermal, eye** (except that oral and eyes cannot be selected for RMM with effectiveness for the same reason as above).

  o When the determinant type is for **environment** the possibilities are **water, air, soil** (except that soil cannot be selected for RMM with effectiveness for the same reason as above).

- **Use conditions' types**: correspond to the subheading in the Exposure Scenario under which the determinant is reported. These subheadings help sorting the various determinants by type of use condition. They are displayed in the CSR but not in the ES for communication. Only a single use conditions type can be selected per determinant type. The list of use conditions' types is provided in Annex 1.

3.1.2 Create/Edit Value description

The potential values of the defined determinant type can be reported in the "value description" tab. When creating a determinant type, one or several values corresponding to different situations for a given determinant can be defined. In all cases, a default value is to be determined. The value description depends on the selected determinant type category. The following sections explain how the value description works for i) quantitative determinants, ii) qualitative determinants and iii) RMM with effectiveness.

3.1.2.1 Edit value description for quantitative determinant type

Quantitative determinants enable the reporting of a condition of use in the form of a numerical value. As long as the determinant is not related to a plugged-in exposure estimation tool the value as such is not used for any calculation in Chesar.

The following inputs are required for creating a quantitative value (Figure 6):

- **Default value**: define a default value for the determinant. The value can be modified by the assessor in each assessment case. This is a mandatory field.

- **Minimum and Maximum**: define a range of possible values that can be entered during the assessment. These fields are not mandatory, but they ensure some consistency in the use of the determinant (e.g. the % of the substance in a product should not be higher than 100).

- **Qualifier**: specify whether the reported value is to be interpreted as an upper bound, a lower bound or as a distinct numerical value.

- **Unit**: free text that represents a unit.

- **Default description for SDS ES** (Standard phrases): One or several standard phrases can be associated to the values of the determinant. Such phrase(s) will be used by default for communicating the conditions of use downstream as soon as the determinant is part of a CSA. The assessor may also decide to select another phrase instead for a specific CSA in Box 5 (not yet available).
  Phrases can be selected from the phrase catalogue imported into Chesar library (for example ESCom, see section 5). To select a phrase, click the **Select standard phrases** icon . You can then search and select within your available catalogue the appropriate standard phrase (see Figure 7). If you do not find any appropriate

phrase it is possible to use free text. In case you already have inserted some standard phrases, you should remove them (clicking the **Remove standard phrases** icon) so that the field becomes editable.

> ⚠ If you use free text for the default description for the SDS ES it may not be possible to generate ES in translated languages and the information may not be transported via IT exchange formats such as ESCom XML.

Figure 6: Edit quantitative determinant "Value description"

Figure 7: Select standard phrases

3.1.2.2　　　Edit value description for qualitative determinant type

Qualitative determinants enable the reporting of conditions of use in a qualitative way (text). Several values corresponding to different conditions of use can be created per determinant. If more than one value is to be reported for one determinant type press the **Add** button. The Edit value option dialog will then appear (Figure 8).

The **Edit** button allows editing previously added values, while the determinant type has not been finalised. Once a determinant type is finalised only standard phrases can be modified. The **Delete** button is used to delete a selected value previously added to the list.

Figure 8: Edit value option for qualitative determinant type

The following inputs are required for creating a qualitative value:

- **Value**: insert a short text characterising the condition of use. Mandatory field.
- **Default** (check box): select one of the different values as default. Mandatory.
- **Description of value for CSR**: add explanation to describe the value with more details. This is to be reported in the exposure scenario in the CSR.
- **Default description for SDS ES** (Standard phrases): as for quantitative determinant types.

3.1.2.3　　　Edit value description for RMM with effectiveness

RMM with effectiveness determinants enable the reporting of risk management measures (text) with a numerical effectiveness value. This value is used by Chesar to calculate releases or exposure. The release/exposure after risk management is equal to the release/exposure before risk management * (100-effectiveness)/100 (see user manual 3).

If more than one value is to be reported for one determinant type press the **Add** button. The **Edit** value option dialog will then appear (Figure 9). As in the case of qualitative determinant types, the Edit button allows editing previously added values, while the determinant type has not been finalised. Once a determinant type is finalised only standard phrases can be modified. The **Delete** button is used to delete a selected value previously added to the list.

Figure 9: Edit value option for RMM with effectiveness determinant type

The following inputs are required for creating a RMM with effectiveness value:

- **Value**: insert short text characterising the risk management measure.

- **Default** (check box): select one of the values as default. Mandatory.

- **Description of value for CSR**: add explanation to describe the value with more details. This is to be reported in the exposure scenario in the CSR.

- **Effectiveness**: insert the assumed effectiveness for each route selected in the General attribute tab. The effectiveness value is a figure between 1 and 100:

  o Determine an effectiveness value as **Default**. Mandatory.

  o Potentially set a range of allowed values (**minimum** and/or **maximum** values) applicable for a specific assessment, e.g. taking into account the substance properties. The user of the determinant (the assessor) will then be able to modify the effectiveness of the determinant within the provided range for his specific case (for example based on the substance properties). If modification of the effectiveness by the assessor is to be disabled, set the minimum and the maximum value equal to the default value.

  o Add **Explanation** on the default effectiveness value and potentially on the range of "allowed values" to help the assessor selecting the appropriate effectiveness value.

- **Default description for SDS ES** (Standard phrases): as for quantitative determinant types.

3.1.3 Administrative information

In the tab Administrative information the following information is displayed, but it is not editable:

- **Author**: displays the legal entity name that is associated to the user who created the determinant type. This cannot be modified.

- **Creation date**: the date of creating the determinant type.

- **Modification date**: the last modification date of the determinant type.

Such information is used for supporting the search functionality or for comparison of modification dates during import (see sections 3.2 and 3.3).

3.2   Import of determinant types

Determinant types can be imported by clicking the **Import** button and then browsing and selecting the relevant file(s) (Figure 10). More than one determinant type can be imported at a time.

Figure 10: Import determinant types
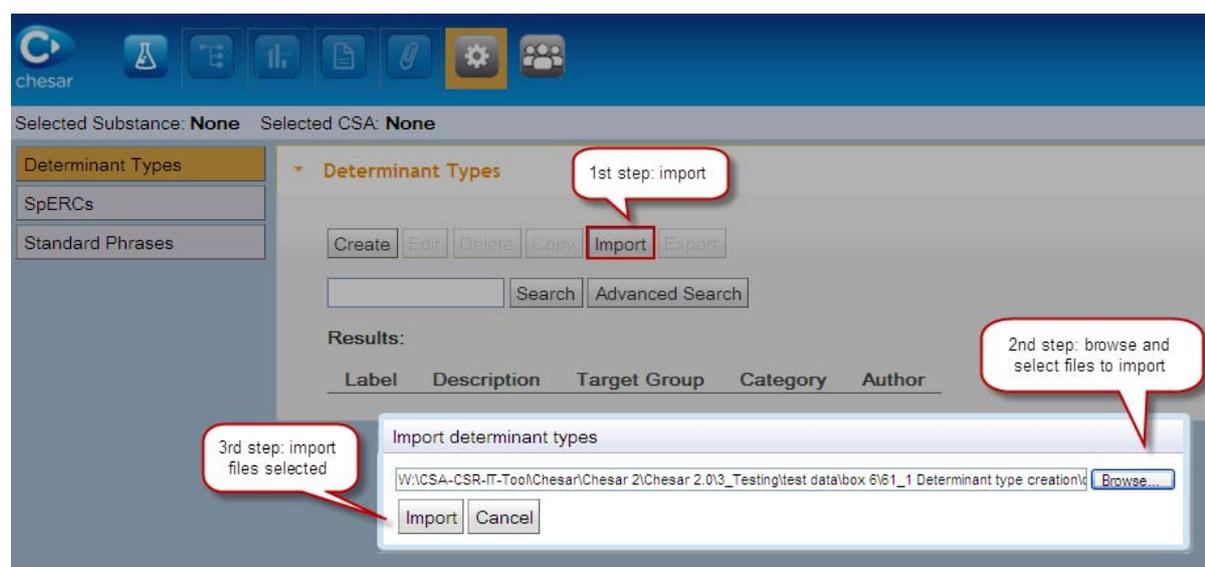
If the same determinant type already exists in the library (same UUID), the system compares the modification date of each of them. If the dates are the same for all existing determinant types, only the new determinant types are imported; if for some determinant types the last modification date is different than the one of the determinant already existing in the library, a message appears (Figure 11). You have to select one of the proposed options:

- **Overwrite all modified**: it overwrites all existing determinant types in the library which have been modified (standard phrases selection or obsolete status has been changed), independently of the modification date.

- **Overwrite modified that are more recent**: it overwrites the determinant types that have been modified more recently than the ones already existing in the library.

- **Do not overwrite none of existing**: it does not import the already existing determinant types, independently of the modification date.

Figure 11: Message when importing determinant type already existing in database
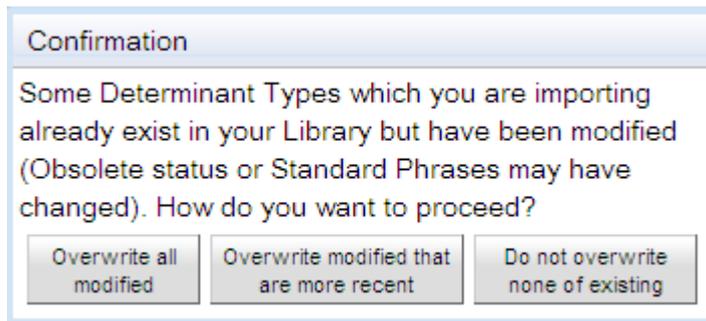
A message will inform when the import is complete; if the import fails a message will also inform the user that the import failed giving the reason for the failure.

3.3   Search for determinant types

The user can run a **Search** query by keyword or by leaving the query field empty. In this case up to a maximum of 200 determinant types will be retrieved in the search. The results are displayed in the **Search Results** table.

The query by keyword (or string of keywords) retrieves the determinant types which contain the keyword (or the exact string) in any of the following fields displayed in the **Search results** table:

- Label
- Description of determinant
- Author

To perform a more targeted search the **Advanced Search** functionality can be used. By clicking on the Advanced Search button the window of Figure 12 opens allowing the search on the data types displayed in the screenshot. The advanced search retrieves all objects which meet all the criteria entered by the user. Fields can be left empty.

⚠️ Determinant types which are set to Obsolete can only be retrieved in an Advanced Search.

Figure 12: Advanced search of determinant types

Although possible in the query, some combinations of values for different fields are not relevant and will not lead to a useful outcome (e.g. if the target group is workers and the release route is air). The usefulness of the search result is to be judged upon by the assessor as Chesar does not recognize the dependency between the fields.

⚠️ If you want to restrict your search by using two or more keyword, you can use the wildcard **%**. For example, typing in the search field "waste%condition" the search result will display all determinants having in the label (or in the description) both words. The searches via wildcard can be performed both for the simple search and for the advanced one

3.4   Edit determinant types

Once determinant types have been created they can be edited individually, in order to either view the information that defines each of them or potentially modify them, in case they are not yet finalised.

3.5   Delete determinant types

Determinant types can be deleted from Chesar library, individually or in a group. If in use in an assessment or in a SpERC, determinant types cannot be deleted, but are set to **obsolete** when the delete button is pressed.

3.6   Export determinant types

Determinant types available in Chesar library can be exported individually or in a group provided they are finalised.

3.7   Copy determinant types

In order to create a new determinant type from an already existing one, you can use the **Copy** functionality, and save the determinant type under a new name. All the information content will be similar with the exception that by default the new determinant is neither finalised nor obsolete.

In order to "update" an existing determinant, you can use the Copy functionality as well. In such a case you should obsolete the initial determinant so that in the future only the new determinant type is used.

It is only possible to copy one determinant type at a time.

4 SPERCS

Specific Environmental Release Categories (SpERCs) are used for environmental assessments. They correspond to sets of information describing specific conditions of use and the corresponding release estimates (to water, air, soil and waste). They have been developed by sector groups of chemical industry and their downstream customer industries in order to refine the emission estimates obtained by using the Environmental Release Categories (ERC) release factors.

When selecting the tab SpERCs you can:

- **Search** for all SpERCs available in the library
- Perform an **Advanced Search** to retrieve a specific subset of SpERCs
- **Import** SpERCs
- **Create** a new SpERC i.e. report the information in a Chesar standard format.

Figure 13: SpERC pane when no SpERc is selected
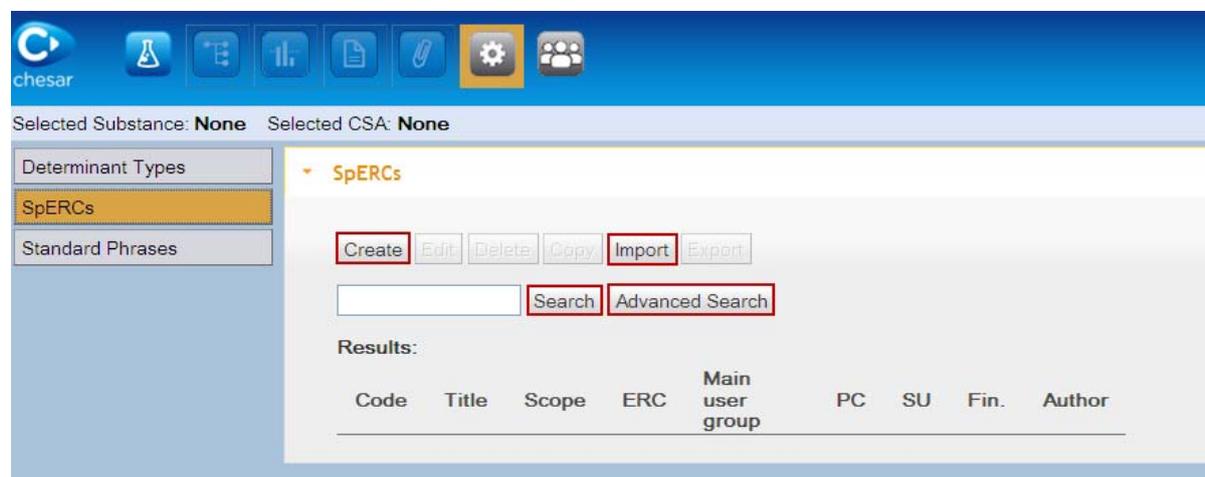
After performing a Search you can select a SpERC by clicking it. It will then be highlighted in blue. Once selected you can:

- **Edit** the selected SpERC
- **Delete** the selected SpERC(s)
- **Copy** the selected SpERC in order to create a new one
- **Export** the selected SpERC(s).

⚠️ The creation (and copy) of SpERCs are expected to be used only by industry sector associations and not by single assessors. Once created by the industry associations the SpERCs can be exported and made available to all assessors via the associations' website. Registrants may then import the SpERCs and use them within their assessments.
Chesar 2.1 does not allow the creation or copy of library elements if you have not imported a legal entity and assigned it to the user (see user manual 7)

4.1 Creation of a SpERC

When clicking on the **Create** button, a pop-up window appears called Create/edit SpERC (Figure 14), in which different information can be inserted:

Figure 14: Create/Edit SpERC

- **Title**: Give the SpERC a short title (mandatory). This title is displayed in the library and in the CSR. It enables the assessor to search for the appropriate SpERC in the library or to select the appropriate SpERC during the assessment.

- **Scope**: List activities or process covered by the SpERC. The field is used by the assessor to search for suitable SpERC in the library. It is not displayed in the CSR.

- **Description of the technical process (for the CSR)**: Describe which uses of a substance are covered by the SpERC, and which types of use conditions generally drive the initial release factors. Include a short description of the technical process the SpERC refers to (mandatory). The text will be displayed in the CSR and should enable better understanding of the activities covered by the reader.

- The **Finalised** checkbox is used to finalise the SpERC, which is required before using it in an assessment or exporting it. Once finalised, the SpERC cannot be modified.

- The **Obsolete** checkbox is used to make a SpERC unavailable when performing an assessment. However it remains valid in assessments already carried out. The obsolete status can be set back as not obsolete.

4.1.1 SpERC identifiers

In the tab **SpERC identifiers** you can enter (Figure 14):

- **SpERC code**: Identifier of the SpERC which can be used by the assessor to retrieve the relevant SpERC. Mandatory field.

- **Link to website**: website address where the SpERC factsheet is published

- **PC** (product category): Multiple entries can be selected by pressing the Ctrl key. This indicates to which type of product (and consequently to which market sector) the SpERC applies.

- **SU** (sector of use) to identify to which downstream sector the SpERC may be relevant for

- **ERC** (environmental release category): Selecting an ERC is mandatory. When creating an assessment for a contributing scenario and choosing SpERCs as the

release estimation method, Chesar will only return those SpERCs for selection that are consistent with the use description in Box 2.

- **Main user group:** This field enables the specification whether a SpERC relates to wide dispersive uses (ERC 8-11) by consumers (SU 21) or by professional workers (SU 22). In case of ERC 1-7 and 12, "use at industrial site" (SU3) can be selected.

4.1.2 Sub-SpERCs

For a given industrial process, the level of emission depends on the conditions of use which may be different in different situations (e.g. in large or small companies) and potentially depend on the substance properties. Consequently, the concept of Sub-SpERCs has been developed enabling to have various set of release factors and related information within one SpERC.

4.1.2.1   Add a Sub-SpERC

After clicking on the tab Sub-SpERCs, and then on the **Add** button a pop-up window appears, labelled Create/edit Sub SpERC. This is composed of two other tabs:

- Sub-SpERC Info
- Sub-SpERC conditions and releases

In the **Sub-SpERC Info tab**, the following information can be reported (Figure 15):

- **Sub-SpERC title**: insert short text to label the sub-SpERC (mandatory). It is used to facilitate the selection of the right sub-SpERC when searching the library or when performing the assessment. The information will be displayed in the CSR.

- **Sub-SpERC code**: insert identifier number/code of the sub-SpERC (mandatory). It facilitates the selection of the right sub-SpERC when searching the library or when performing the assessment for the environment.

- **Sub-SpERC scope**: describe the type of processes/activities covered in the sub-SpERC. This text is used to facilitate the selection of the relevant sub-SpERC in the library or when performing the assessment for the environment.

- **Vapour pressure range (Pa)**: indicate the vapour pressure range for which the release factors of the sub-SpERC are valid. There is no need to fill this field if the release factor does not depend on the vapour pressure. When available this information enables the automatic selection of the appropriate Sub-SpERC for assessment depending on the properties of the assessed substance.

- **Water solubility range (mg/l):** as for vapour pressure, indicate the water solubility range for which the release factors of the sub-SpERC are valid.

- **Daily use amount:** quantify the daily amount used in a typical site. This information is displayed in the CSR and is communicated downstream. It is used in Chesar for calculation of initial release rates (see user manual 3). A field is available to explain the source of information for the daily use amount: **Explanation on the daily use amount (for the CSR).** This amount can be overwritten by the assessors.

- **Annual use amount**: quantify the annual amount used.

Figure 15: Create/edit sub SpERC: Info tab

In the **Sub-SpERC conditions and releases** tab, the following information can be reported (Figure 16):

- **Initial release factors** for water, air, soil and waste: Insert the fraction of use-amount initially released from the process. All fields are mandatory. This information is displayed in the CSR.

- **Justification** fields: explain how the values for these initial release factors have been obtained. Justification for each release route is mandatory. This information is displayed in the CSR.

Figure 16: Create/edit sub SpERC: Sub-SpERC conditions and releases tab

For describing the conditions of use driving the release of the substance to the environment (to be displayed in the CSR) or related to the treatment of wastes generated press the **Add** determinants button (Figure 16). A pop-up menu appears for choosing the type of determinant to be added.

Two different "types" of determinants can be added:

- **Determinants linked to the initial release factor:** Such determinants describe the conditions of use which relate to the initial release factor reported. Also if a specific treatment of waste is required for the waste generated by the process, an appropriate[1] determinant should be added. For that purpose a value has to be selected from qualitative determinant types for the environment. These determinants cannot be modified nor removed by the assessor during the assessment.

- **Determinants not linked to the initial release factor:** For certain substances or use amounts the initial release factor may be too high to ensure control of risk. Therefore additional risk management measure with expected effectiveness (e.g. an

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[1] Relevant for the "use conditions' type" *Conditions and measures related to treatment of waste (including article waste)*

on site specific waste water treatment facility) may be defined in the sub-SpERC. A default value for the determinant is to be selected. The effectiveness of the measure impacts on the release. It is recommended to select by default a value where the measure is not applied (with an effectiveness of 0%). The assessor may decide to change the value in his assessment and select the appropriate measure. It is also possible to add qualitative determinant not being linked to the initial release factor. These will not impact on the final release.

Once you have chosen to add a determinant (linked or not to the initial releases) you search in the library for an appropriate determinant and select it. Any determinant can be deleted from the list of determinants in the Sub-SpERC by clicking on it and pressing the Delete button.

4.1.2.2   Edit a Sub-SpERC

Once a Sub-SpERC has been created it can be edited, in order to either view its content or potentially modify it, in case the Sub-SpERC is not yet finalised.

4.1.2.3   Copy a Sub-SpERC

In order to create a new Sub-SpERC you may start from the copy of an existing one. Select the Sub-SpERC to be copied by clicking on it, click the **Copy** button. The **Create/edit Sub-SpERC** window will appear with the selected Sub-SpERC. Edit the information as needed and click the **OK** button to save new the Sub-SpERC.

⚠️ It is not possible to edit the values of determinants in a copied sub-SpERC. If you wish to modify the values available for a determinant (e.g. a high or low effectiveness of additional RMM should become available for a certain sub-SpERC), then delete the determinant from the sub-SpERC and create a new one.

4.1.2.4   Delete a Sub-SpERC

To delete a Sub-SpERC, select it and press the button **Delete**. **Please note**, you will not be asked to confirm this action which cannot be undone.

4.1.3 Administrative information

In the tab Administrative information the following information is displayed:

- **Author**: displays the legal entity name that is associated to the user who created the SpERC. This cannot be modified.

- **Creation date**: the date of creating the SpERC.

- **Modification date**: the last modification date of the SpERC.

4.2   Import of SpERCs

As for determinant types, you can import sets of SpERCs that are available in a Chesar format, by clicking the Import button and then browsing and selecting the relevant file.

If some SpERCs already exist in the library (same UUID), the system compares the modification date and if the dates are the same for all existing SpERCs, only the new SpERCs are imported; if some of the dates are different, the window below (Figure 17) appears. Select one of the proposed options:

- Option a: Overwrite all modified SpERCs, independently of the modification date

- Option b: Overwrite the SpERCs that have been modified more recently than the ones already existing in the library

- Option c: Do not import the already existing SpERCs, independently of the modification date.

Figure 17: Message when importing SpERCs already existing in database
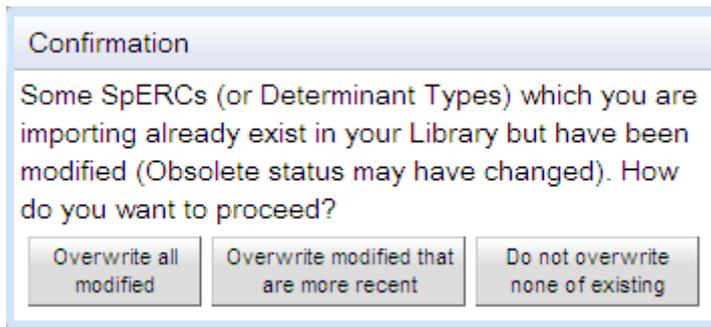
A message will inform when the Import is complete; if the import fails a message will also inform the user that the Import failed giving the reason for the failure.

4.3 Search for SpERCs

The user can run a search query by keyword or can run a search query by leaving the query field empty. In this case up to a maximum of 200 SpERCs will be retrieved in the search. The results are displayed in the **Search Results** table.

The query by keyword (or string of keywords) retrieves the determinant types which contain the keyword (or the exact string) in the fields:

- SpERC code
- SpERC title
- SpERC scope
- Author

To perform a more targeted search the **Advanced Search** functionality can be used. By clicking on the Advanced Search button the window of Figure 18 opens allowing the search on the data types displayed in the screenshot.

Figure 18: Advanced search of SpERC

As for determinant types the advanced search retrieves only the SpERCs for which all the conditions are met. Fields can be left empty.

Please note that SpERCs which are set to Obsolete can only be retrieved in an Advanced Search.

4.4   Edit SpERCs

Once SpERCs have been created, they can be edited individually.

Search for a SpERC, and select it by clicking on it. The selected SpERC is then highlighted in blue. Click the **Edit** button.

If the SpERC is not finalised, all its fields can be modified. It will also be possible to Add, Edit, Copy and Delete Sub-SpERCs and within these Sub-SpERCs, Add and Delete determinants.

If the SpERC is finalised, it is possible to view its content, but will no longer be possible to modify it.

4.5   Delete SpERCs

SpERCs can be deleted from the Chesar library, individually or in a group. If in use in an assessment SpERCs cannot be deleted. If you do not want such a SpERC to be available for a new assessment, you can set it to **Obsolete**.

4.6   Copy SpERCs

In order to create a new SpERC from an already existing one the copy functionality can be used. All the information content will be similar with the exception that by default the new SpERC is neither finalised nor obsolete.

Search for the SpERC you want to copy and then select it. The selected SpERC will be highlighted in blue. Click the **Copy** button. The **Create / Edit SpERC** dialog appears with the previously selected SpERC content, which can be then modified.

It is only possible to copy one SpERC at a time.

4.7   Export SpERCs

Industry sector associations generating SpERCs in a Chesar format will export them to make them available on their website. SpERCs available in the Chesar library can be exported individually or in a group provided they are finalised.

Search for the SpERCs you want to export (note that Obsolete SpERCs can only be retrieved in an advanced search), and then select those you want to export. If you want to export a set of SpERCs, hold the Ctrl key while selecting the desired SpERCs. The selected SpERCs will be highlighted in blue. Click the **Export** button. A file selector window will open prompting you to specify the path and the name of the export file. To complete the export procedure, click the **Save** button. The exported file will have the extension **.chr**.

When updating a SpERC by creating a new one (most probably copying it) and setting to obsolete the existing one, industry associations may want to keep up to date their list of available SpERC. In this case it is recommended that they include in their export package of SPERC the obsoleted ones. When importing the package and deciding to overwrite the existing SpERCs (see option b in section 4.2), then this will automatically set to obsolete the ones for which updates have been imported.

5 STANDARD PHRASES

Standard phrases are provided in catalogues in order to facilitate the exchange of information is Safety Data Sheet. Standard phrases have to be uniquely identified within a catalogue. Translations of those phrases in various languages may be available, so that the exposure scenario to be communicated can be automatically generated in various languages.

When selecting the tab standard phrases you can:

- **Import** standard phrases from external catalogues
- Search (basic **Search** on a string or **Advanced Search** based on more defined criteria) to retrieve all or a specific subset of standard phrases available in the library

Figure 19: Standard phrases pane

5.1 Import of standard phrases catalogues

Standard phrases cannot be created in Chesar as they have to be managed by external catalogues such as ESCom (for more information see http://www.cefic.org/Industry-support/Implementing-reach/IT-Tools/). To be able to import the phrases from external catalogues those catalogues have to provide their content in a Chesar compatible format.

You can import standard phrases catalogues that are available in a Chesar format, by clicking the Import button and then browsing and selecting the relevant file. If some standard phrases already exist in the library (same UUID) then only the new phrases will be imported.

⚠️ ESCom 2.0, planned to be released by the end of 2012, will be available for use in Chesar 2.1. The current version of ESCom cannot be used in Chesar 2.

5.2 Search for standard phrases

The user can run a **Search** query by keyword or by leaving the query field empty. In this case up to a maximum of 100 standard phrases will be retrieved in the search. The results are displayed in the **Search Results** table.

The query by keyword (or string of keywords) retrieves the standard phrases which contain the keyword (or the exact string) in any of the following fields (the fields English

phrase, Catalogue name and Originator are displayed in the **Search results** table):
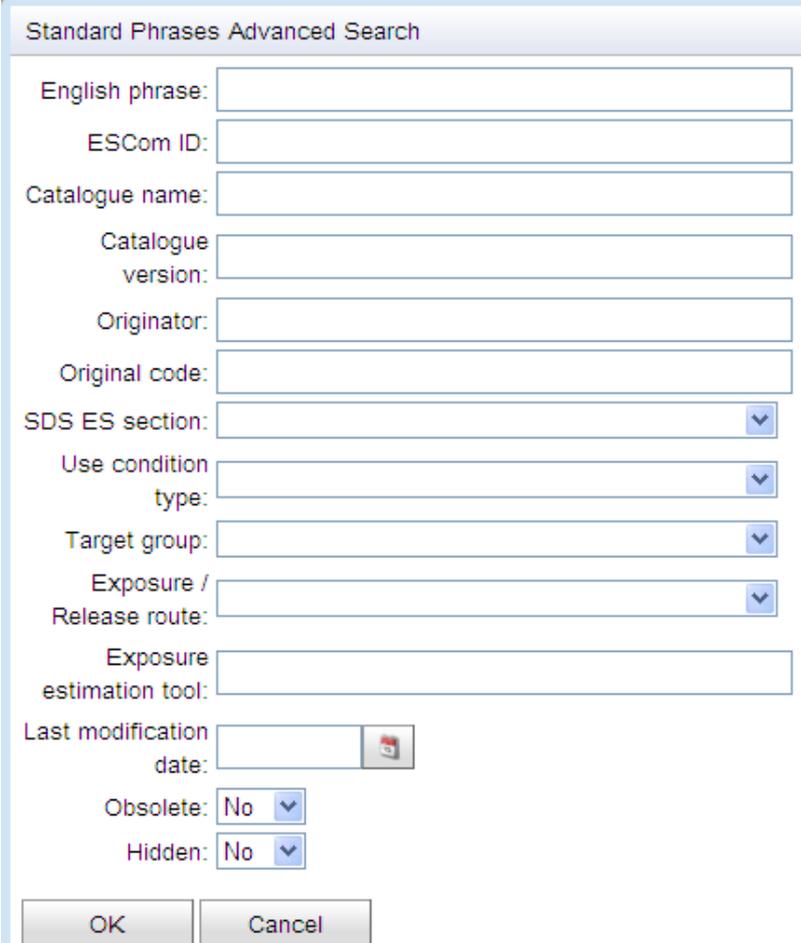
- English phrase
- Catalogue name
- Originator (identifying the source of the phrase in ESCom)
- Original code (code set by the originator)
- ESComID

To perform a more targeted search the **Advanced Search** functionality can be used. By clicking on the Advanced Search button the window of Figure 12 opens allowing the search on the data types displayed in the screenshot. The advanced search retrieves all objects which meet all the criteria entered by the user. Fields can be left empty.

⚠️ Standard phrases which are set to **Obsolete** or **Hidden** can only be retrieved in an Advanced Search.

The outcome of an advanced search depends whether metadata for the different phrases have been provided in the original catalogue. For example if you search for all phrases relevant for the environment and select "Target group" environment, you will only retrieve those phrases for which the metadata "environment" had been assigned.

Figure 20: Advanced search of standard phrases

Although possible in the query, some combinations of values for different fields are not relevant and will not lead to a useful outcome (e.g. if the target group is workers and the release route is air). The usefulness of the search result is to be judged upon by the assessor as Chesar does not recognize the dependency between the fields.

⚠️ If you want to restrict your search by using two or more keyword, you can use the wildcard **%**. For example, typing in the search field "waste%release" the search result will display all standard phrases having in the label the two words. The searches via wildcard can be performed both for the simple search and for the advanced one

5.3   Hide standard phrases

In order to target your search you can **Hide** a number of phrases in your library. This means that the phrases are not deleted from the library (which may be useful in case you import CSA containing those phrases) but they will not be retrieved when you search for phrases unless you specifically require seeing them in an advanced search. If you want to make a phrase systematically visible again, you have to search for it with the advanced search, select it and press the unhide button.

5.4   Delete standard phrases

You can delete standard phrases from your library by pressing the **Delete** button. If the phrase is already in use in a CSA or in a determinant type, it will be set has **Hidden**. If not in use it will be permanently deleted.

5.5   View the details of a standard phrase

You can see all the details related to a standard phrase (in particular the metadata that have been assigned to it and some administrative information) by selecting it and pressing the **View** button (Figure 21).

Figure 21: View the details of a standard phrase

Annex 1 - Use conditions' type

⚠️ The explanations under the sub-headlines of the contributing scenarios describe <u>potential</u> contents. The actual content of an exposure scenario depends on the assessment carried out by the supplier.

Table 1: Type of use condition type valid for activities by workers

Types of use condition valid for activities by workers	
Code	Contributing scenario for workers
W - 1	Product (article) characteristics *Concentration of the substance in a mixture, the physical state of that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure*
W - 2	Amount used (or contained in articles), frequency and duration of use/exposure *Amounts used at a workplace (per task or per shift);* *Duration per task/activity (e.g. hours per shift) and frequency (e.g. single events or repeated) of exposure*
W - 3	Technical and organisational conditions and measures *Process design aiming to prevent releases and hence exposure of workers, for example containment* *Other given operational conditions: e.g. technology or process techniques determining the initial release of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, process conditions related to temperature and pressure.* *Engineering controls, e.g. exhaust ventilation, general ventilation; specification of effectiveness of measure* *Specific organisational measures or measures needed to support the functioning of particular technical measures (e.g. training and supervision).*
W - 4	Conditions and measures related to personal protection, hygiene and health evaluation *Personal protection, e.g. wearing of gloves, face protection, full body dermal protection, goggles, respirator; specification of effectiveness of measure; specify the suitable material for the PPE (where relevant), advise how long the protective equipment can be used before replacement (if relevant)*
W - 5	Other conditions affecting workers exposure
W - 6	Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply <u>*Use specific*</u> *measures expected to reduce the predicted exposure beyond the level estimated based on the exposure scenario.*

Table 2: Use condition type categories valid for activities by consumers

Types of use condition valid for activities by consumers	
Code	Contributing scenario for consumers
C - 1	Product (article) characteristics *Concentration of the substance in a mixture or article, the physical state of that mixture (solid, liquid; level of dustiness or viscosity), package design affecting exposure;*
C - 2	Amount used, frequency and duration of use/exposure *Amounts used per event ; duration of exposure per event and frequency of events;*
C - 3	Measures related to information and behavioural advice to consumers including personal protection and hygiene *Safety advice to be communicated to consumers in order to control exposure, e.g. technical instruction, behavioural advice; please note: usually personal protection measures like gloves are not expected for consumer products;*
C - 4	Other conditions affecting workers exposure *Other operational conditions e.g. room volume, air exchange rate, outdoor or indoor use*

Table 3: Use condition type categories valid for environment – activities by workers

Types of use condition categories valid for environment – activities by workers	
Code	Contributing scenario the environment
E- w - 1	**Product (article) characteristics** *Concentration of the substance in a mixture; viscosity of product; package design affecting exposure*
E - w - 2	**Amount used, frequency and duration of use (or from service life)** *Daily and annual amount per site (for uses at industrial sites).* *Intermittent release (used < 12 times per year for not more than 24 h)if relevant*
E - w - 3	**Technical and organisational conditions and measures** *Process design aiming to prevent releases and hence exposure to the environment, for example containment;* *Technology or process techniques determining the initial release of substance from process (via air and waste water); dry or water based processes; conditions related to temperature and pressure; indoor or outdoor use of products; work in confined area;* *Specific organisational measures needed to support the functioning of particular technical measures..* *On-site treatment of waste water, scrubbers, filters and other technical measures aiming at reducing releases to air, sewage system, surface water or soil; specify effectiveness of measures;* *specify the size of industrial sewage treatment plant (m3/d), degradation effectiveness and sludge treatment (if applicable)*
E - w - 4	**Conditions and measures related to sewage treatment plant** *Size of municipal sewage system/treatment plant (m3/d); specify degradation effectiveness; sludge treatment technique (disposal or recovery); measures to limit air emissions from sewage treatment (if applicable); please note: the default size of the municipal STP (2000 m3/d) will be rarely changeable for downstream uses.*
E - w - 5	**Conditions and measures related to treatment of waste (including article waste)** *Type of suitable treatment for waste, e.g. hazardous waste incineration, chemical-physical treatment for emulsions, chemical oxidation of aqueous waste; specify effectiveness of treatment; specify type of suitable recovery operations for waste, e.g. re-distillation of solvents, refinery process for lubricant waste, recovery of slags, heat recovery outside waste incinerators; specify effectiveness of measure (if relevant);*
E - w - 6	**Other conditions affecting environmental exposure** *Flow rate of receiving surface water (m3/d; usually 18,000 m3/d for the standard town by default); please note: the default flow rate will be rarely changeable for downstream uses.*
E - w - 7	**Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply** *Use specific measures expected to reduce the predicted exposure beyond the level estimated based on the exposure scenario*

Table 4: Use condition type categories valid for environment – activities by consumers

Types of use condition valid for environment – activities by consumers	
Code	Contributing scenario the environment
E- c - 1	**Product (article) characteristics** *Product related conditions, e.g. the concentration of the substance in a mixture; package design affecting exposure*
E - c - 2	**Amount used, frequency and duration of use (or from service life)**
E - c - 3	**Conditions and measures related to treatment of waste (including article waste)** *Type of suitable treatment for waste generated by consumer uses, e.g. municipal waste incineration, hazardous waste incineration; corresponding instructions regarding separation of waste to be communicated to consumers;* *Type of suitable recovery operations for waste generated by consumer uses, e.g. refinery process for lubricant waste; corresponding instructions regarding separation of waste to be communicated to consumers*
E - c - 4	**Other conditions affecting environmental exposure** *e.g. indoor or outdoor use of products*