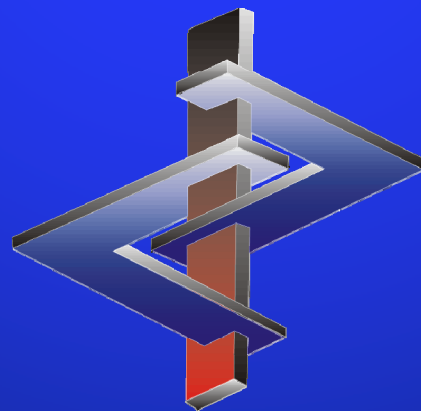


Exposure Scenarios

Steps for creating Exposure Scenarios in ChemGes

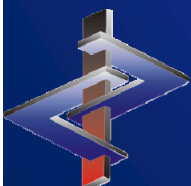
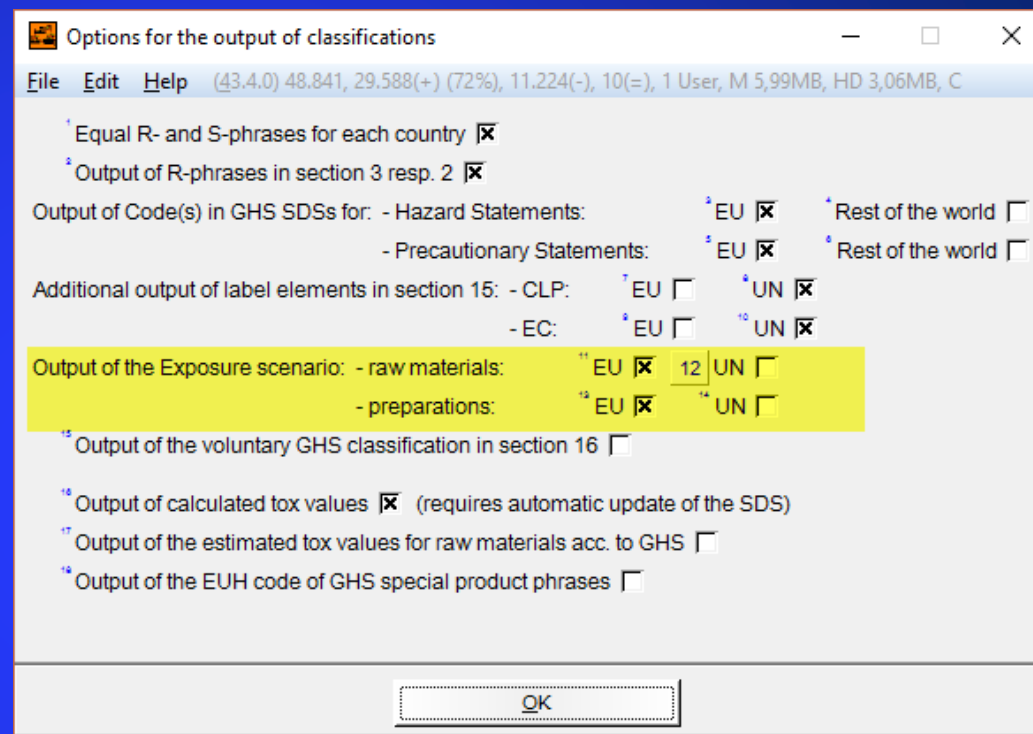


Additional Information can be
found in the corresponding
document.

Step 1

Activate, as needed, fields 11 to 14 regarding the output of Exposure Scenarios (ES).

Maintenance Programs – Safety Data Sheets – Calculation and Output Options – Options for the output of classifications



Step 2

Indicate for each substance, the availability of a Chemical Safety Assessment (CSA).

Raw materials :

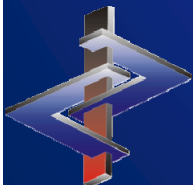
Item 32 "Chemical Safety Assessment available" in the database tab *Country Specific Information*. (Maintenance of Raw Materials)

Preparations:

Item 20 in the database tab *Country Specific Classifications*. (Maintenance of Preparations)

This screenshot shows the 'Country specific information' window. The 'Country specific information' tab is active. Key fields include: 'BetrSichV (D)' with a dropdown menu; 'VbF-class' with dropdowns for 'D' and 'A'; 'Solvent' checked; 'VOC solvent' checked; 'Exempt solvent (USA)' unchecked; 'Austrian solvent regulation' unchecked; 'Swiss VOCV' checked; 'Waste disposal key numbers' with 'EU' and 'CH' dropdowns; 'Waste hazards' with 'HP 6: Acute Toxicity' selected; 'MAL-Code' with '5-6' selected; 'MAL factor 1' and 'MAL factor 2' with percentage ranges; 'Swiss hazard class' with '03' selected; 'Water hazard class' with 'D 2' and 'NL Z(1)' selected; 'Black list' checked; 'Registration numbers' with 'ECHA notification - Reference Number' field; 'REACH pre-registration' with 'Deadline for registration' and 'Pre-registered substance' checked; and 'Special percentage limits for the SDS' with 'acc. to presettings' selected. Item 34 'Chemical Safety Assessment available' is checked and highlighted in yellow. An 'OK' button is at the bottom right.

This screenshot shows the 'Country specific classifications' window. The 'Country specific classifications' tab is active. Key fields include: 'BetrSichV (D)' with 'Flammable liquid' selected; 'VbF (D)' with 'A II' selected; 'VbF (A)' with a dropdown; 'Storage Hazard Class (Lgk) acc. to VCI/Germany' with '3' selected; 'WHC (Water hazard class)' with 'D 2' and 'NL A(2)' selected; 'Seveso III' with 'Qualified quantities: 200 t, 500 t, Categories: E2, P5c'; 'Disposal key numbers' with 'EU' '08 01 11*' and 'Austria' '55503'; 'Relevant waste hazards' with 'HP 3, HP 4, HP 6, HP 10, HP 13, H' selected; 'Coating' checked; 'Danish MAL-Code' with '4-5' selected; 'VOC value' with 'EU-VOC' '500.0 g/l' and '50.00 %'; 'US-VOC' '500.0 g/l' and 'Swiss VOCV-content' '50.00 %'; 'Detergent Regulation' with 'Fragrance', 'Essential oil', and 'Dye' unchecked; 'Cosmetic Regulation' with 'Cosmetic product according to Regulation 1223/2009/EC' and 'Leave-on Product' unchecked; 'ECHA notification' with 'Reference Number' field; and 'Chemical Safety Assessment available' checked and highlighted in yellow. Other fields include 'This product is a raw material with impurities' (unchecked), 'Main raw material', 'Output of the main raw material in the SDS', 'CAS of the preparation', 'GHSCode (BG BAU (D))', and 'Limit table for the SDS' (acc. to presettings). Buttons for '[Esc] Eject' and '[Ctrl F4] Calculation of the WHC (D)' are at the bottom.



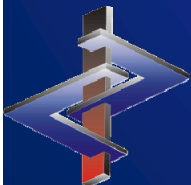
Step 3

Create the first ES from the editing screen of the SDS.

- Click on Section X
- ChemGes will automatically fill in the appropriate fields from the database.
- If this is your only ES, then fill in the additional information. (see next Steps)
- If you will generate additional ESs, leave this as it is for now and follow the next Steps.

The screenshot shows a software interface for editing an SDS. It includes a table of hazard statements (H315, H319, H317, H336, H304) with corresponding pictograms. Below this, there are sections for 'Additional information', '2.2 Label elements', 'Labelling according to Regulation (EC) No 1272/2008', 'Hazard pictograms', and 'Signal word'. A 'Warning' section is also visible. The interface has a right-hand sidebar with a scroll bar and a 'Great Britain' flag icon at the bottom right.

The screenshot shows a form titled 'Annex: Exposure scenario'. It contains various fields for defining exposure conditions, such as 'Short title of the exposure scenario', 'Sector of Use', 'Product category', 'Process category', 'Article category', 'Environmental release category', 'Notes', 'Description of the activities / processes covered in the Exposure scenario', 'Conditions of use', 'Duration and frequency', 'Worker', 'Environment', 'Physical parameters', 'Physical state', 'Fluid', 'Concentration of the substance in the mixture', 'Raw material', 'Used amount per time or activity', 'Other operational conditions', 'Other operational conditions affecting environmental exposure', 'Other operational conditions affecting worker exposure', 'Avoid contact with eyes.', 'Avoid contact with the skin.', 'Avoid long-term or repeated skin contact.', and 'Do not breathe the gas/vapour/aerosol.'



Step 4

Example

- Company XY sells paint.
 - Outdoor or indoor use
 - Wood or plastic application
- Company XY generates **4 Dummy Substances** named:
 1. *Outdoor Use on Wood*
 2. *Outdoor Use on Plastic*
 3. *Indoor Use on Wood*
 4. *Indoor Use on Plastic*
- The ESs of these dummy substances are called **Templates**
- Company XY produces Product A (for Indoor and Outdoor use)
- The four exposure scenarios are assigned to Product A.

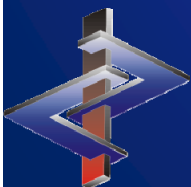
Thus, Product A now has the ES that was created with its SDS and these four other Templates

- The Dummy Substances assigned to these Templates have similar characteristics as Product A. They are not copies of Product A.
- These Dummy Substances can also be used for Product B, with similar characteristics.

These **Templates**, now linked, can be adapted to the actual substance. Only the linked 'copies' are adapted, not the original templates

Introductory points to the generation of additional ESs:

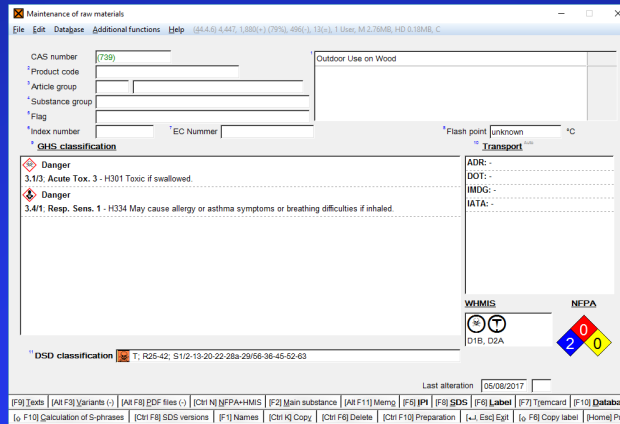
- - Additional ESs are created by means of **Templates**.
 - **Templates** are generated for **Dummy Substances**.
 - **Dummy Substances** are fictional substances and are not copies of the original substance.
 - **Dummy Substances** are created with a Specific Use and Exposure in mind and have *similar characteristics* to the substance for which the ES applies.
 - *Similar characteristics* must be general enough to apply to other substances to which this Specific Use and Exposure apply.
 - **Templates** are used over and over for many different substances



Step 5

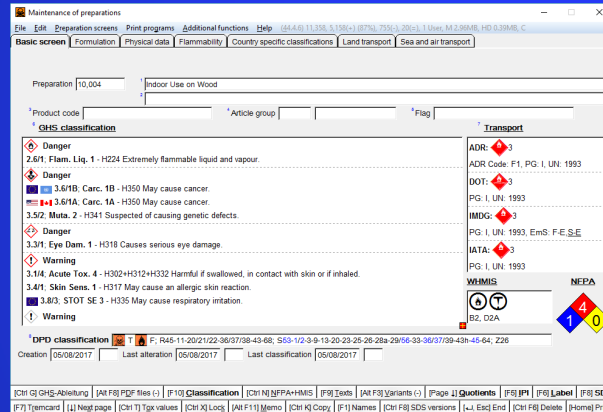
Create Dummy Substances:

- New raw materials – pseudo-CAS numbers



AND/OR

- New preparations



Note:

The ESs from these substances can be used interchangeable. Raw material ESs for preparations and vice versa. They can also be mixed. Use as needed.

Dummy Substance Features:

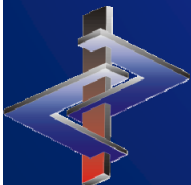
Name:

- representative/descriptive of ES Template

Characteristics:

- apply to every substance that will use this Template and the ES described by the template

Annex: Exposure scenario	
<input type="checkbox"/>	Short title of the exposure scenario
<input type="checkbox"/>	Sector of Use
<input type="checkbox"/>	Product category
<input type="checkbox"/>	Process category
<input type="checkbox"/>	Article category
<input type="checkbox"/>	Environmental release category
<input type="checkbox"/>	Notes
<input type="checkbox"/>	Description of the activities / processes covered in the Exposure Scenario
<input type="checkbox"/>	See section 1 of the annex to the Safety Data Sheet.
<input type="checkbox"/>	Conditions of use
<input type="checkbox"/>	Duration and frequency
<input type="checkbox"/>	6 workdays/week
<input type="checkbox"/>	Worker
<input type="checkbox"/>	Environment
<input type="checkbox"/>	Physical parameters
<input type="checkbox"/>	Physical state
<input type="checkbox"/>	Fluid
<input type="checkbox"/>	Concentration of the substance in the mixture
<input type="checkbox"/>	Raw material
<input type="checkbox"/>	Used amount per time or activity
<input type="checkbox"/>	Other operational conditions
<input type="checkbox"/>	Other operational conditions affecting environmental exposure
<input type="checkbox"/>	No special measures required.
<input type="checkbox"/>	Other operational conditions affecting worker exposure
<input type="checkbox"/>	Other operational conditions affecting consumer exposure
<input type="checkbox"/>	No special measures required.
<input type="checkbox"/>	Other operational conditions affecting consumer exposure during the use of the product
<input type="checkbox"/>	Not applicable.
<input type="checkbox"/>	Risk management measures
<input type="checkbox"/>	Worker protection
<input type="checkbox"/>	Organisational protective measures
<input type="checkbox"/>	No special measures required.
<input type="checkbox"/>	Technical protective measures
<input type="checkbox"/>	Ensure that suitable extractors are available on processing machines
<input type="checkbox"/>	Personal protective measures
<input type="checkbox"/>	Do not inhale gases / fumes / aerosols.
<input type="checkbox"/>	All phrases from heading 8.50.50.40 Protective suit
<input type="checkbox"/>	Measures for consumer protection
<input type="checkbox"/>	Ensure adequate labelling.
<input type="checkbox"/>	Environmental protection measures
<input type="checkbox"/>	Air
<input type="checkbox"/>	Water
<input type="checkbox"/>	No special measures required.
<input type="checkbox"/>	Soil
<input type="checkbox"/>	Notes
<input type="checkbox"/>	Disposal measures
<input type="checkbox"/>	Ensure that waste is collected and contained.
<input type="checkbox"/>	Disposal procedures
<input type="checkbox"/>	Must not be disposed together with household garbage. Do not allow product to reach sewage system.
<input type="checkbox"/>	Waste type
<input type="checkbox"/>	Partially emptied and uncleaned packaging
<input type="checkbox"/>	Notes
<input type="checkbox"/>	Exposure estimation
<input type="checkbox"/>	Worker (oral)
<input type="checkbox"/>	Worker (dermal)
<input type="checkbox"/>	Worker (inhalation)
<input type="checkbox"/>	Environment
<input type="checkbox"/>	Consumer
<input type="checkbox"/>	Not relevant for this Exposure Scenario.
<input type="checkbox"/>	Guidance for downstream users
<input type="checkbox"/>	No further relevant information available.



Step 6

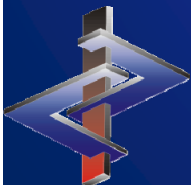
Further Automation: ES Grouping

Maintenance Programs – Safety Data Sheets – Settings for printouts and file outputs – Exposure Scenarios

The screenshot displays the ChemGes software interface with several windows open. A central window titled "Administration of Chemicals" is highlighted with a blue 3D-style text effect. Below it, a "Maintenance programs" window is open, showing a menu with options: "A - Program adjustments", "B - Various tables", "E - Settings for printouts and file outputs", and "F - Printers". A red arrow points from the "Administration of Chemicals" title to the "Maintenance programs" window. Another red arrow points from the "Settings for printouts and file outputs" option in the menu to a "Settings for prints and data" window. A third red arrow points from the "Exposure scenario" option in the menu to an "Exposure scenarios" window. The "Exposure scenarios" window shows a table of scenarios:

No.	Description
739	Outdoor Use on Wood
10,004	Indoor Use on Wood

Below the table, there is a list of fields: "[1] Previous field", "[Page 1] Overview", "[F1] Product code", "[F2] Index number", "[F3] EC number", and "[Page 1] Exposure scenarios".



Step 8

Adding Exposure Scenarios to your original substance

- Enter the editing screen of the SDS.
 - Click at the bottom of the screen on the option *Ctrl X Additional Exposure Scenarios*.

[Ctrl X] Additional exposure scenarios

- Text is red if ESs are linked

[Ctrl X] Additional exposure scenarios (2)

- Enter the Templates to link

Product code	Description	Exp.sc.
X 1	Wood Use	
10,005	Outdoor Use	<input checked="" type="checkbox"/>

- ESs assigned to a substance which is assigned to a substance for which scenarios are being generated, will also be included.

Substance no.	Description	Percent
(740)	Indoor Use on Plastic	50.0000
(741)	Outdoor Use on Plastic	50.0000

Product code	Description	Exp.sc.
X 1	Wood Use	
10,005	Outdoor Use	<input checked="" type="checkbox"/>
10,006	Use on Plastic	<input checked="" type="checkbox"/>

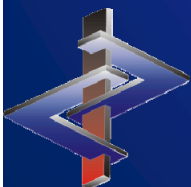
Product code	Description	Exp.sc.
X 1	Wood Use	
10,005	Outdoor Use	<input checked="" type="checkbox"/>
10,006	Use on Plastic	<input checked="" type="checkbox"/>

Deactivation of substance exposure scenario

[Esc] Exit

All additional ES Templates are automatically populated with information from the SDS.

The Point *Deactivation of Substance Exposure Scenario* can be activated if only templates are to be used.



Step 9

Further Automation: Linking Phrases

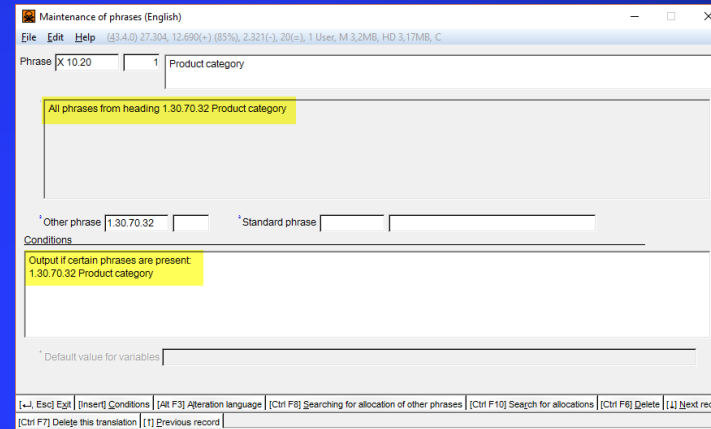
Maintenance Programs – Safety Data Sheets – Text Modules

The data in the SDS must correspond to the data in the ESs.

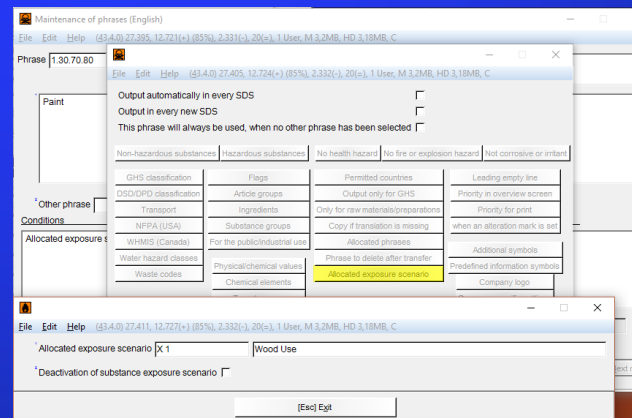
This can be automated via conditions.

Fill in Data for each Template and the corresponding Data in the SDS.

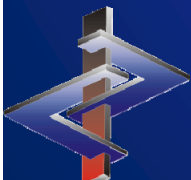
1. Link directly to Phrases from SDS:



2. Allocate Phrase to ES:



Annex: Exposure scenario	
	Short title of the exposure scenario
	Indoor Use on Plastic
	Sector of Use
	All phrases from heading 1.30.70.31 Sector of Use
	Product category
	All phrases from heading 1.30.70.32 Product category
	Process category
	All phrases from heading 1.30.70.33 Process category
	Article category
	Environmental release category
	Notes
	Description of the activities / processes covered in the Exposure Scenario



**More detailed Information can be found in the Manual to
ChemGes**

@ www.dr-software.com Downloads

