

Exposure Scenarios

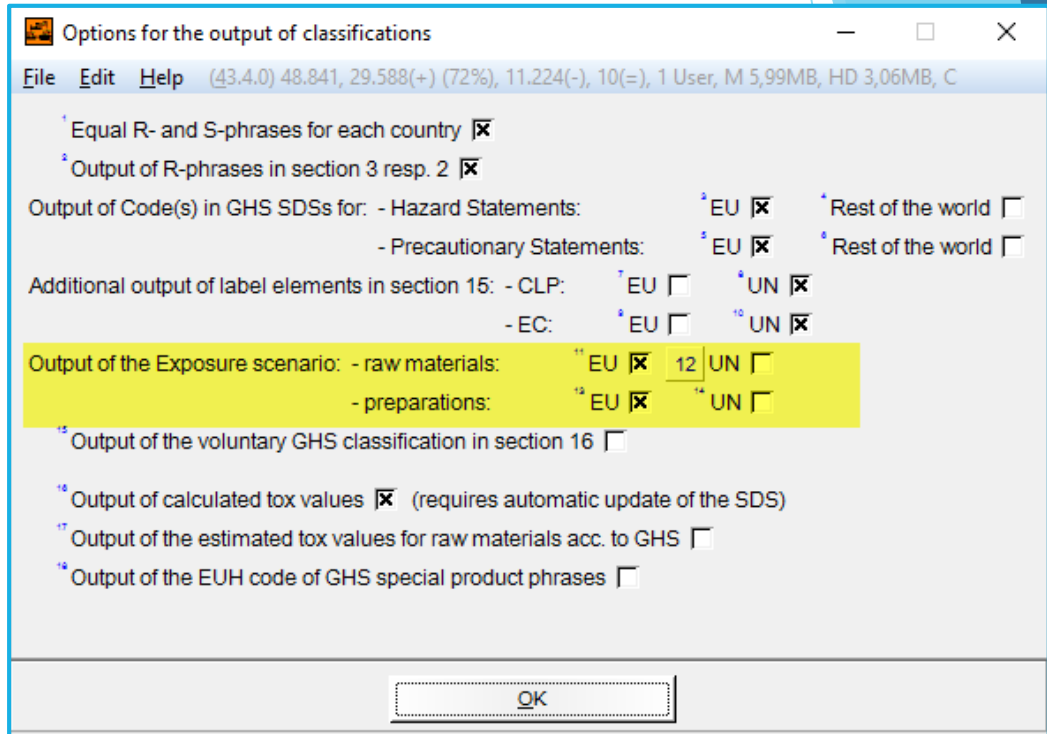
Steps for creating Exposure Scenarios in ChemGes

Additional Information can be found in the corresponding document and the manual to ChemGes.

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)

The screenshot shows the 'Country specific classifications' window. The 'Country specific classifications' tab is active. The 'Chemical Safety Assessment available' checkbox is checked and highlighted in yellow. Other fields include: Seveso III (Qualified quantities: 5000 t, 50000 t, Category: P3b), Annex XVII REACH (Restrictions) [3, 28, 40], Waste # [08 01 11*], Relevant waste hazards [HP 3, HP 5, HP 6, HP 7, HP 8, HP 11, HP 13], Detergent Regulation (Fragrance, Essential oil, Dye), Cosmetic product according to Regulation 1223/2009/EC, Biocidal Products Regulation (UFI code, Company: DR Software GmbH, Code: 0J10-G0EH-S009-RGPK), ECHA notification, ABM [Z(1)], MAL-Code [6-6], WHC (Water hazard class) [3], Storage class (LGK) acc. to TRGS510 [2 B], VbF [BetSichV], The product is subject to annex 2 of the ChemVerbotsV [checked], GHSCode (BG BAU), Coating VOC value (EU, US, Canada), and Wood preservative.

The screenshot shows the 'Country specific information' window. The 'Country specific information' tab is active. The 'Chemical Safety Assessment available' checkbox is checked and highlighted in yellow. Other fields include: Seveso III (Qualified quantities: 5 t, 50 t, CAS 50-00-01), TA-Luft, Biocidal active substance, Annex XVII REACH (Restrictions) [3, 28], Waste # [17 01 01], Waste hazards [HP 6, HP 7, HP 8, HP 11, HP 13], ECHA notification - Reference Number, Storage class (LGK) acc. to TRGS510 [6.1 D], VbF [BetSichV], Water hazard class [3], Type [List classification], The substance is subject to annex 2 of the ChemVerbotsV [checked], Registration (2/22-2345-XXX-XXXX, Pre-registration, Tonnage band, Deadline for registration, Pre-registered substance [checked]), RTECS # [LP 8925000], Respiration filter [BK], Customs tariff number [2912 11 00], Test tube [Dräger], and Special percentage limits for the SDS [acc. to pre-settings].

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 the 'Additional information' section of an SDS. It lists hazard statements (H315, H319, H317, H336, H304) and their corresponding hazard pictograms (GHS02, GHS07, GHS08, GHS09). Section X is highlighted in yellow, indicating it is the current section being edited. The interface includes a toolbar at the bottom and a 'Great Britain' logo in the bottom right corner.

The screenshot shows the 'Annex: Exposure scenario' form. It contains various fields for describing the exposure scenario, including:

- 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 (See section 1 of the annex to the Safety Data Sheet.)
- Conditions of use
- Duration and frequency (5 workdays/week)
- 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 (No special measures required.)
- Other operational conditions affecting worker exposure
- Avoid contact with eyes.
- Avoid contact with the skin.
- Avoid long-term or repeated skin contact.
- Do not breathe gas/vapour/aerosol.



Step 4

Introductory points to the generation of additional ESs:

Example

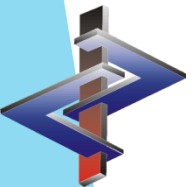
- Company XY sells paint.
 - Outdoor or indoor use
 - Wood or plastic application
- Company XY generates **4 Dummy Substances** named:
 1. *Outdoor Use on Wood*
 2. *Outdoor Use on Plastic*
 3. *Indoor Use on Wood*
 4. *Indoor Use on Plastic*
- The ESs of these dummy substances are called **Templates**
- 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

- ▶ 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 interchangeably. Raw material ESs for preparations and vice versa .

They can also be mixed. Use as needed.

The screenshot displays a software window titled 'Maintenance of preparations'. It shows a 'Preparation' entry for 'Indoor Use on Wood' with a product code '10,004'. The 'GHS classification' section lists several hazards: 2.6.1 Flam. Liq. 1 - H224 Extremely flammable liquid and vapour; 3.6.1B Carc. 1B - H350 May cause cancer; 3.6.1A Carc. 1A - H350 May cause cancer; 3.5.2 Muta. 2 - H341 Suspected of causing genetic defects; 3.3.1 Eye Dam. 1 - H318 Causes serious eye damage; 3.1.4 Acute Tox. 4 - H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled; 3.4.1 Skin Sens. 1 - H317 May cause an allergic skin reaction; 3.4.3 STOT SE 3 - H335 May cause respiratory irritation. The 'Transport' section shows 'ADR: 3', 'ADR Code: F1, PG. I, UN: 1993', 'PG. I, UN: 1993', 'IMDG: 3', and 'IATA: 3'. A 'NEPA' hazard pictogram is visible, showing a blue diamond with a white '1' and a yellow diamond with a black '4'. The 'DSD classification' is listed as 'T, R25-42, S1/2-13-20-22-28a-29/56-36-45-52-63'. The bottom of the window features a navigation bar with various menu options like 'F10 Database', 'F11 Names', 'F12 Labels', etc.

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	
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	
See section 1 of the annex to the Safety Data Sheet.	
Conditions of use	
Duration and frequency	
5 workdays/week.	
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	
No special measures required.	
Other operational conditions affecting worker exposure	
Other operational conditions affecting consumer exposure	
No special measures required.	
Other operational conditions affecting consumer exposure during the use of the product	
Not applicable.	
Risk management measures	
Worker protection	
Organisational protective measures	
No special measures required.	
Technical protective measures	
Ensure that suitable extractors are available on processing machines	
Personal protective measures	
Do not inhale gases / fumes / aerosols.	
All phrases from heading 8.50.50.40 Protective suit	
Measures for consumer protection	
Ensure adequate labelling.	
Environmental protection measures	
Air	
Water	
No special measures required.	
Soil	
Notes	
Disposal measures	
Ensure that waste is collected and contained.	
Disposal procedures	
Must not be disposed together with household garbage. Do not allow product to reach sewage system.	
Waste type	
Partially emptied and uncleaned packaging	
Notes	
Exposure estimation	
Worker (oral)	
Worker (dermal)	
Worker (inhalation)	
Environment	
Consumer	
Not relevant for this Exposure Scenario.	
Guidance for downstream users	
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 the 'Administration of Chemicals' menu open. The menu path is: Administration of Chemicals > Settings for printouts and file outputs > Exposure scenario. Red arrows indicate the navigation path from the main menu to the 'Exposure scenario' sub-menu.

Administration of Chemicals

- Program adjustments
- Various tables
- Phrases
- Transport
- Access rights
- Printouts
- Safety Data Sheets**
- TremCards
- Internal Plant Instructions
- Labels

Settings for prints a...

- Printing of text modules
- Export of text modules with missing translation
- Type of data output of SDS
- Names of PDF, HTML and text files
- Print settings
- Cover letter
- Company logo
- Definitions for sending emails
- Exposure scenario**

Exposure scenario

Scenario: X 1 | Wood Use

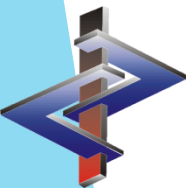
Allocated exposure scenarios

No.	Description
X 2	Scenario 1
X 3	Scenario 2

No.	Description
(739)	Outdoor Use on Wood
10,005	Outdoor Use

Navigation shortcuts:

- [1] Previous field
- [Page ↓] Overview
- [F1] Product code
- [F2] Index number
- [F3] EC number
- [Page ↑] 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	[X]

- 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

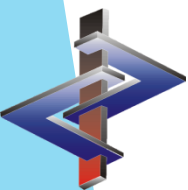
Product code	Description	Exp. sc.
X 1	Wood Use	
10,005	Outdoor Use	[X]
10,006	Use on Plastic	[X]

Product code	Description	Exp. sc.
X 1	Wood Use	
10,005	Outdoor Use	[X]
10,006	Use on Plastic	[X]

Deactivation of substance exposure scenario

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

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.

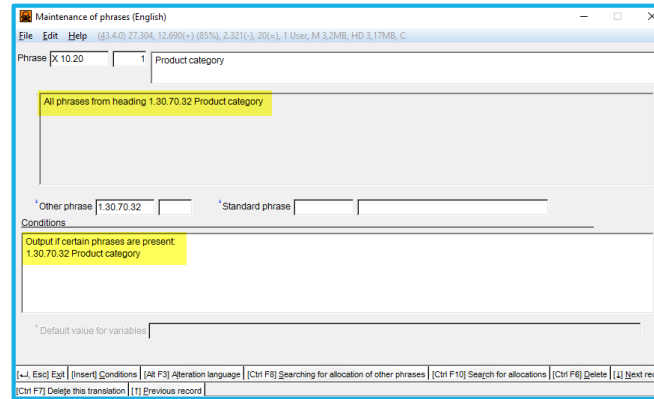
Annex: Exposure scenario	
	Short title of the exposure scenario
	Indoor Use on Plastic
	Sector of Use
	All phrases from heading 1.30.70.31 Sector of Use
	Product category
	All phrases from heading 1.30.70.32 Product category
	Process category
	All phrases from heading 1.30.70.33 Process category
	Article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

Further Automation:

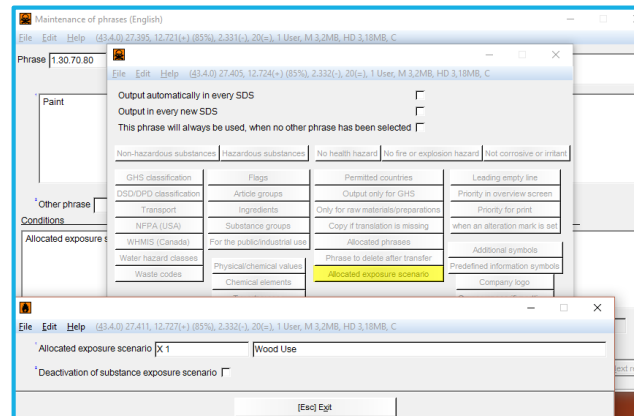
Linking Phrases

Maintenance Programs – Safety Data Sheets – Text Modules

1. Link directly to Phrases from SDS:



2. Allocate Phrase to ES:



More detailed Information can be found in the Manual to ChemGes

@ www.dr-software.com - Downloads