

Step-by-Step Instructions for the creation of Exposure Scenarios:

The examples presented in these instructions are simply for the purpose of demonstrating principles and are therefore very simplified.

First activate, as needed the fields **50 to 54** concerning the **Output of Exposure scenarios**, in the screen **Calculations** [*Maintenance programs – Safety Data Sheets – Options – General options*].

The screenshot shows the 'Calculations' window with the following sections and options:

- When retrieved:** Lock automatically Offer copying possibility Always apply the alteration date in all languages
- Descriptions:** Automatic print preview if the user has read-only rights Create missing country version automatically
- Variants/product codes:** Product description for raw materials [Defined description for the SDS] Use SDS substance description of your own language (if necessary) Substitute language for missing substance description [English]
- Kits:** Transfer of variant information into the SDS Store variant information when printing a customer SDS
- CAS numbers:** Additional product codes [No output]
- Classification:** Printout of a cover sheet Write additional product codes in the cover sheet
- Section 3:** Always write the letters CAS in front of the CAS number CAS numbers of SDS descriptions with simultaneous marking as standard or as EU designation Also show CAS numbers for substances with EC number > 900-000-0
- Codes:** H phrases P phrases Additional GHS phrases (EUH)
- Section 3:** Additional output of labeling in section 15
- Percentages:** Limit for the treatment of the whole product as raw material [100 %] Type of percentage [Use limit tables] Percentage of proprietary descriptions Decimals [4] Adapt to legal limits Output of special limits Show only if the specified percentage is ≥ the limit Consideration of 1% limit for non-hazardous preparations
- OELVs:** M factors Canc., muta. and repr. categories One line per hazard symbol
- Tox values:** OELV and OEL-B values from [1,000 %] Additional OELV-limits [Complete names of legislations] Also list substances with OELVs in section 8 in section 3 In EU countries only consider EU limit values
- Waste code:** Output of calculated tox values (ATE) (requires automatic update of the SDS) Output of estimated raw material tox values according to GHS
- Transport:** Output of group names Output of hazardous properties of waste
- TA-Luft:** DOT/TDG For [USA] [Canada] [Canada french] ADR [Not for: USA] Output of water content Use limits instead of exact percentages
- Exposure scenarios:** Raw materials Preparations Start new page for the exposure scenario
- Other output options:** Output of abbreviations and acronyms in section 16 of the GHS SDS Country code on SDS (only possible with lines around the SDS) Flashpoint of preparations [Exact] Output of substances, from which the physical value has been taken over directly EU Rest of the world

1. Next, indicate for each substance, the availability of a **Chemical Safety Assessment (CSA)**.
 - a. For raw materials this option is number 31 “**Chemical Safety Assessment available**” in the database tab **Country Specific Information** [*Maintenance of raw materials*].

Country specific information

File Edit Database Help (52.0.15)

Physical data | Additional physical-/chemical values | OELVs | Toxicological values | Substance listings | Transport | **Country specific information**

1 Seveso III Qualified quantities: 5 t, 50 t, CAS 50-00-0 TA-Luft: 23 Type Class 24
 Biocidal Products Regulation 2 Biocidal active substance 3 Nanomaterial
 4 Annex XVII REACH (Restrictions) 3, 28, 72 25
 Waste # 6 Waste hazards HP6, HP7, HP8, HP11, HP13 26
 7 ECHA notification - Reference Number
 8 Chemical Safety Assessment available

9 Storage class (LGK) acc. to TRGS510 6.1 C 27 Waste # 28 VbF
 10 VbF - BetrSichV Flammable liquid 29 Waste #
 Water hazard class 11 3 12 Type List classification MAL Code 5-6
 13 The substance is subject to annex 2 of the ChemVerbotsV
 Groups: 14 Causing cancer I(2) 30 Factor 1 from 0,1% → 50.000, Hazard from 1% → 6
 15 Pregnancy C 31 Factor 2 from 0% → 2.500, Hazard from 0,1% → 3
 16 Mutative 5 32 ABM Z(1) 33 Black list
 17 Exposure peak limit 4 Waste 34 Designated
 BAT values: 18 Parameter 35 Workplace
 19 Value 30 Unit 36 Municipal
 21 Material 37 RTECS # LP 8925000
 22 Moment 38 Respiration filter BK
 39 Customs tariff number 2912 11 00
 40 Test tube Dräger

41 Substance groups for California Cleaning Product Right to Know Act

Registration 42 22-2345-XXX-XXXX
 Pre-registration 43 Tonnage band - 44 Deadline for registration 45 Pre-registered substance
 46 HMIRA numbers
 47 Nanoform
 48 Special percentage limits for the SDS acc. to presetsings → Use limit tables

OK

b. For a preparation, this is option 20 in the database tab *Country Specific Classifications* [Maintenance of preparations].

Country specific classifications

File Edit Help (52.0.15)

Basic screen | Formulation | Physical data | **Country specific classifications** | Transport

1 Seveso III: Qualified quantities: 200 t, 500 t, Category: E2
 2 Annex XVII REACH (Restrictions) 4B
 Waste # 3 08 01 11* 4 Relevant waste hazards HP4, HP5, HP10, HP13, HP14
 5 Cosmetic product according to Regulation 1223/2009/EC 6 Leave-on Product
 Detergent Regulation: 7 Fragrance
 8 Essential oil
 9 Dye
 10 Biocidal Products Regulation
 11 ECHA notification
 12 Chemical Safety Assessment available

13 UFI and PCN notification
 14 Company Sample Company
 15 UFI Code GK20-J0Q8-V001-PJFE A820-H0XP-N00K-1645 01/21/2021
 16 EuPCS PC-DET-1.OTH, PC-CLN-10.3
 17 MIM

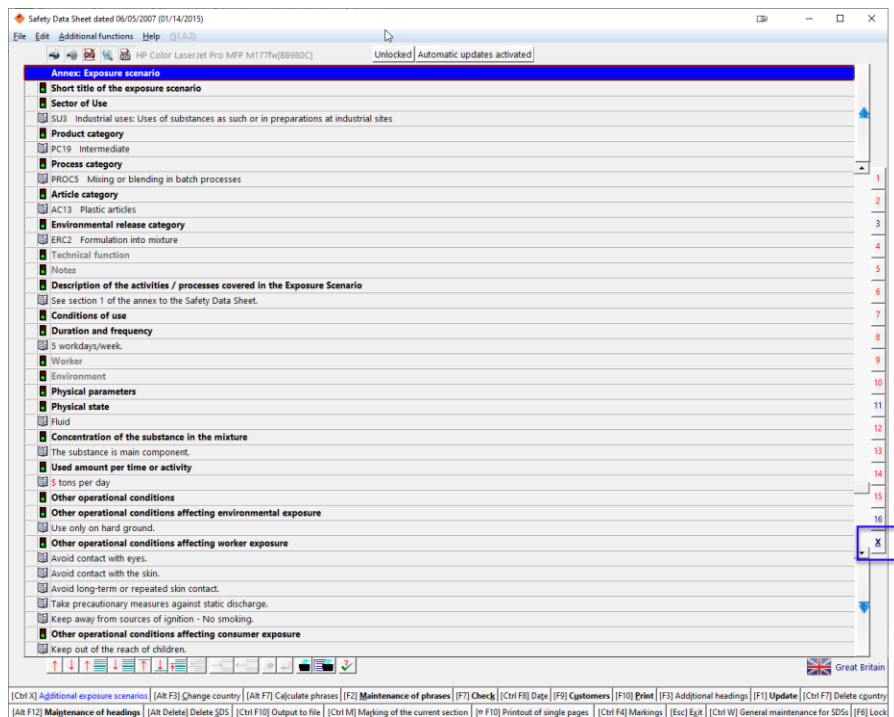
17 The product is subject to annex 2 of the ChemVerbotsV 21 Waste # 22 Waste # 55.503 23 ABM A(2)
 18 WHC (Water hazard class) 2 24 MAL-Code 4-5
 19 Storage class (LGK) acc. to TRGS510 8 A
 BetrSichV
 20 GISCode (BG BAU)

25 Dangerous Substances and Quantity of Dangerous Substances 4: 200 리터
 26 Hazardous Substances Subject to Special Control
 Waste 27 Designated 28 Workplace 29 Municipal

30 Coating VOC value: g/l % 31 Wood preservative
 g/l %

[Esc] Egd [Ctrl F4] Calculate the WHC [D] [F4] F4 Printout of documentation for WHC [Ctrl W] Water hazardous contents [Ctrl A] ABM (NL) contents [Ctrl S] Solvents [Ctrl M] MAL code contents [Ctrl R] Registry numbers
 [Ctrl M] ABM (NL) contents [Ctrl X] Ingredients Annex XVII

2. Then enter the editing screen of the SDS for which the Exposure Scenarios (ESs) are to be created [by pressing F8 in the *Maintenance of raw materials / preparations*]. There, the first ES is generated by going to **Section X** (below Section 16) and filling in the necessary data. All fields, for which the ChemGes database contains data, are automatically populated.



3. Conditions by which phrases are selected can be used for a more automated output (see steps 8 and 9) of information that does not automatically appear on the ESs.
4. The creation of additional ESs is a little more complicated. The following points are an introduction to the principles behind the steps that are listed below.
 - a. Additional ESs are created by means of **Templates**.
 - b. **Templates** are generated for **Dummy Substances**.
 - c. **Dummy Substances** are fictional substances and are not copies of the substance for which the additional scenarios are being creating.
 - d. **Dummy Substances** are merely substances created with a Specific Use and Exposure in mind and simply have similar characteristics to substances to which the ES is to be applied. These similar characteristics must be general enough to apply to all substances to which this Use and Exposure apply. In this way, the **Templates** can be used over and over again for many different substances. (Compare this concept to the Labeling module, in which templates are created (in the *Maintenance of Labels*) which are then chosen for individual substances and automatically populated.)

Consider this Example:

- Company XY sells paint. This paint is either applied outdoors or indoors and on either wood or on plastic.
- Company XY generates **4 Dummy Substances**

- The first substance is called *Outdoor Use on Wood*
- The second substance is called *Outdoor Use on Plastic*
- The third substance is called *Indoor Use on Wood*
- The fourth substance is called *Indoor Use on Plastic*
- The ESs created for these four dummy substances are called **Templates**
- Company XY produces Product A (for Indoor and Outdoor use)
- Company XY assigns the four exposure scenarios to Product A.
- Thus, Product A now has the ES that was created with its SDS and these four other Templates (Further discussion will come later regarding the ES created for the actual substance SDS).
- The Dummy Substances assigned to these Templates have similar general characteristics (to the extent applicable to the ES) as Product A, but they are not copies of Product A.
- These Dummy Substances can then also be used for Product B, if it has these similar characteristics.
- Upon linking these **Templates** to Product A, it becomes possible to make them more specific (only the linked copies and not the original templates) to Product A. This is done with phrases and conditions. In this way the appropriate information is then automatically output in the SDS and the ES and the legislatively required link is created.

Steps for generating additional Exposure Scenarios:

1. Generate **Templates** via dummy raw materials (with pseudo-CAS numbers) or dummy preparations (with new preparation numbers)

These will be interchangeable:

- a. One can use **Raw Material Dummy Templates** for Raw Material Exposure Scenarios and for Preparation Exposure Scenarios. The same applies for **Preparation Dummy Templates**. For example, when generating an ES for Product A (a preparation) from Company XY, one might want to use a phrase that can only be accessed in Raw Material SDSs. Therefore, one can use a raw material dummy template and link it to Product A.
- b. Equally it is possible to link a mix of raw material and of preparation templates, if desired.

Maintenance of raw materials

File Edit Database Help (S2.0.15)

CAS number [745] Index number EC number

Indoor Use on Wood

Product code Variant Main substance Flag Article group Substance groups

GHS classification

Danger

3.1/1; Acute Tox. 1 - H300 Fatal if swallowed.

3.1/3; Acute Tox. 3 - H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

3.1/3; Acute Tox. 3 - H311+H331 Toxic in contact with skin or if inhaled.

Danger

3.4/1; Resp. Sens. 1 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

The substance is not part of the DR software database.

GHS areas [Pre-selected] All

Last alteration 04/09/2020

[Alt F11] Memo

[Esc] Save and exit [F1] Translations of the descriptions [Alt F3] Variants [Ctrl F7] Itemcard [Alt F8] PDF files [Alt F11] Memo [Ctrl F8] Versions of old SDSs [F6] Copy label [Ctrl C] Copy/alteration/exchange [Alt Delete] Delete [Page 1] Occurrence in preparations [Ctrl I] Data for ISS notification [Ctrl P] Product information [Home] Price [Alt 9] Reference [Ctrl R] REACH Pre-registration

Maintenance of preparations

File Edit Print programs Help (S1.0.2)

Basic screen Formulation Physical data Country specific classifications Transport

Preparation 10,012 Outdoor Use on Wood

Product code Variant Flags Article group

GHS classification (Locked H phrases)

Danger

2.6/2; Flam. Liq. 2 - H225 Highly flammable liquid and vapor.

Warning

3.7/2; Repr. 2 - H361 Suspected of damaging fertility or the unborn child.

3.7/2; Repr. 2 - H361d Suspected of damaging the unborn child.

3.9/2; STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.

Warning

3.2/2; Skin Irrit. 2 - H315 Causes skin irritation.

3.3/2A; Eye Irrit. 2A - H319 Causes serious eye irritation.

3.3/2; Eye Irrit. 2 - H319 Causes serious eye irritation.

3.4/1; Skin Sens. 1 - H317 May cause an allergic skin reaction.

3.8/3; STOT SE 3 - H336 May cause drowsiness or dizziness.

Warning

3.1/5; Acute Tox. 5 - H303 May be harmful if swallowed.

[Ctrl X] Lock

GHS areas [Pre-selected] All

Creation 04/09/2020 Last alteration 04/09/2020 Last classification 04/09/2020

[Alt F11] Memo

[Ctrl G] GHS-Abkürzung [Alt F8] PDF files [F10] Classification [Alt F3] Variants [Ctrl P] Production information [Ctrl F7] Itemcard [Ctrl C] Copy/Exchange [F1] Translations of the descriptions [Ctrl F8] Versions of old SDSs [Esc] Save and exit [Alt Delete] Delete [Page 1] Occurrence in preparations [Home] Price [F6] <Shift+F6> Copy label [Ctrl F10] Classification with print [Ctrl M] Data for RR report [Ctrl I] Data for ISS notification

2. When generating these **Dummy Substances** (raw materials or preparations) the following actions must be taken for the newly created substance:
 - a. Assign a *Substance Name* that is representative/descriptive of the Exposure Scenario Template.

Product code	Description	Exp.sc.
A X 1	Wood Paint	
B (747)	Outdoor Use	X

- Here Exposure Scenario Templates (from Dummy Substances) or Exposure Scenario Groups (Groups of Templates) can be chosen. All ESs that are assigned to a substance which is assigned to provide an ES for the current substance for which scenarios are being generated, will also be included.

For Example: Substance A is paint. The ES template (1) ‘Application on Plastic’ is assigned; two ESs have previously been assigned to template (1) ‘Outdoor Application’ and ‘Indoor Application’. As a result, all three templates are now assigned to substance A.

Formulation: 10,013 Use on Plastic

Substance number	Description	Symbols	Percent
1 (744)	Outdoor Use on Plastic		50,00
2 (746)	Indoor Use on Plastic		50,00

[F10] Breakdown of formulation

201 This product is a raw material with impurities

202 Main raw material 203 Output on SDS

204 CAS # of the preparation

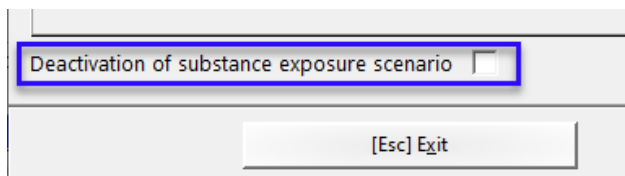
205 Limit table for the SDS [acc. to presettings] Manual percentages for SDSs

[Ctrl P] Prices [Insert] New ingredient [Esc] Edit

Product code	Description	Exp.sc.
A X 1	Wood Paint	
B (747)	Outdoor Use	X
10,013	Application on Plastic	X

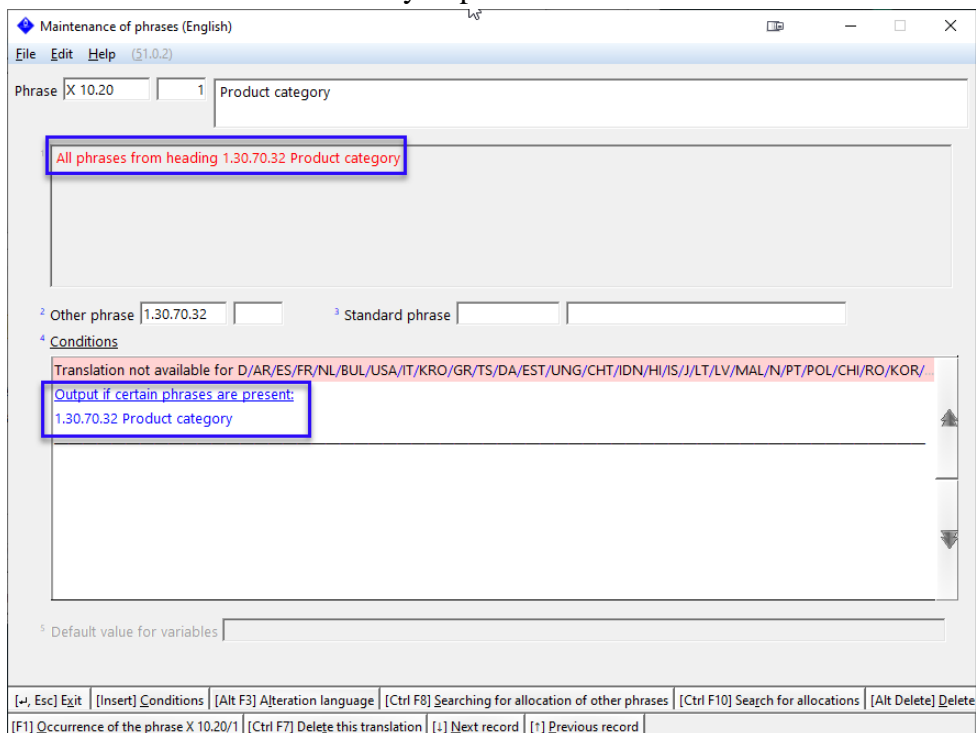
- These additional (linked) ES Templates are automatically populated, just like the first one that was created for this SDS, with information from the SDS.

- When adding ESs, it is possible to deactivate the ES that was originally generated for the substance (generated in Step 3) by activating the option **Deactivation of Substance Exposure Scenario** in the screen *Additional exposure scenarios*. This can be activated if only templates are to be used.

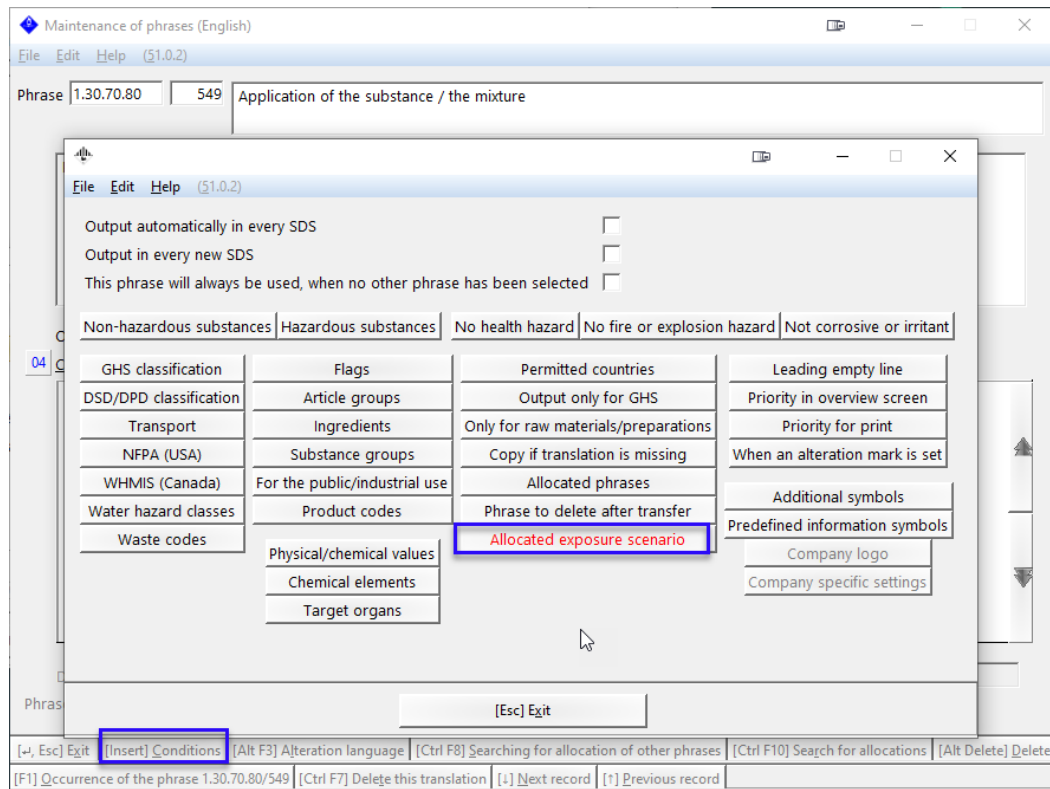


- The automatic filling of ESs is done via conditions in the *Maintenance of Phrases* [Maintenance Programs – Safety Data Sheets – Text Modules].

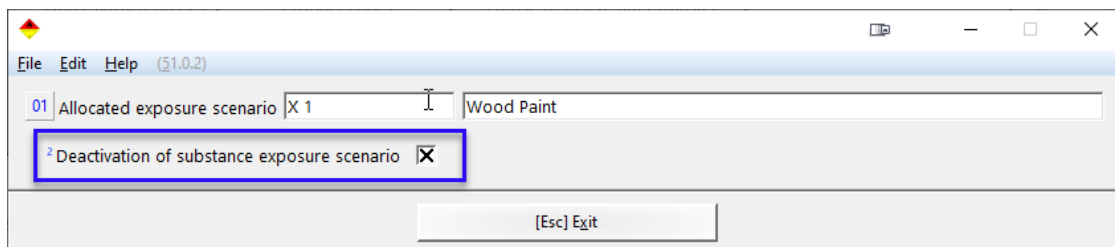
- Positions in the ES can be linked directly to phrases in the SDS.



- Phrases can be allocated to ESs.



- In this condition, the option for the *Deactivation of substance exposure scenario* can also be activate, thus automating it for this ES.



9. The data in the SDS must correspond to the data in the ESs. Therefore, it will be necessary to ensure that direct links are created via various phrases and that the SDS has an adequate amount of phrases to cover all of the ESs. This applies, for example, to Product Categories in Section 1.