

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:

Activating the output of the Exposure Scenario

Activate, as needed, fields 50 to 54 regarding the output of Exposure Scenarios (ES).

(Ctrl 4 *Maintenance Programs – Safety Data Sheets – Options – General Options*)

The screenshot shows the 'Calculations' window with the following settings:

- When retrieved:** When new; 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:** 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
- Classification:** Codes; H-phrases; P-phrases; Additional GHS phrases (EUH); Additional output of labeling in section 15
- Section 3:** Percentages; Limit for the treatment of the whole product as raw material | 100 %; Type of percentage | Use limit tables; Decimals; Adapt to legal limits; Do not adapt for Canada; Percentage of proprietary descriptions; Output of special limits; Show only if the specified percentage is ≥ the limit; Consideration of 1% limit for non-hazardous preparations; M factors; Canc., muta. and repr. categories; One line per hazard symbol
- TLVs:** TLV and BEI values from | 1.000 %; TRK values | from | 0.100 %; Additional TLV-limits; Complete names of legislations; Also list substances with TLVs in section 8 in section 3; In EU countries only consider EU limit values
- Tox values:** Output of calculated tox values (ATE); Output of estimated raw material tox values according to GHS
- Waste code:** Output of group names; Output of hazardous properties of waste
- Transport:** DOT/TDG For: USA | Canada | Canada french; ADR Not for: USA; IMDG | All; IATA | All
- TA-Luft:** 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

Step 2:

Activation of availability of Chemical Safety Assessment (CSA) for all substances

Raw materials :

Item 8 “Chemical Safety Assessment available” in the database tab *Country Specific Information*.

(Maintenance of Raw Materials)

Preparations:

Item 16 “Chemical Safety Assessment available” in the database tab *Country Specific Classifications*.

(Maintenance of Preparations)

Country specific information

File Edit Database Help (51.0.2)

Physical data | Additional physical/chemical values | TLVs | 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

Biocidal Products Regulation 2 Biocidal active substance Nanomaterial

4 Annex XVII REACH (Restrictions) 3, 28, 72

5 Waste # 6 Waste hazards | HP6, HP7, HP8, HP11, HP13

7 ECHA notification - Reference Number

Chemical Safety Assessment available

9 Storage class (LGK) acc. to TRGS510 | 6.1 C

10 VbF | - | BetrSichV |

11 Water hazard class | 3 | 12 Type | List classification

13 The substance is subject to annex 2 of the ChemVerbotsV

Groups: 14 Causing cancer | (12)

15 Pregnancy | C

16 Mutative | 5

17 Exposure peak limit | 4

BAT values: 18 Parameter 19 Value 20 Unit

21 Material

22 Moment

23 RTECS # | LP 8925000

24 Respiration filter | BK

25 Customs tariff number | 2912 11 00

26 Test tube | Dräger

43 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 Special percentage limits for the SDS acc. to presetsings

OK

Country specific classifications

File Edit Help (51.0.2)

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

1 Seveso III: | Qualified quantities: 200 t, 500 t, Categories: E2, P5c

2 Annex XVII REACH (Restrictions) | 3, 48

Waste # | 08 01 11* 4 Relevant waste hazards | HP3, HP4, HP5, HP10, HP13, HP14

Detergent Regulation: 5 Fragrance 6 Essential oil 7 Dye

8 Cosmetic product according to Regulation 1223/2009/EC 9 Leave-on Product

10 Biocidal Products Regulation

11 Company | Betonwerk Zement

12 Contains unknown ingredients

13 Code | K000-D0RX-X006-GAQT 14 EUPCS

15 ECHA notification

Chemical Safety Assessment available

16 WHC (Water hazard class) | 2

17 Storage class (LGK) acc. to TRGS510 | 3

VbF | - | BetrSichV | Flammable liquid

18 The product is subject to annex 2 of the ChemVerbotsV

19 GHSCode (BG BAU) | -

20 ABM (A2) 21 MAL-Code | 4-5 22 Waste # | 55.503 23 Waste #

vbf | -

24 Dangerous Substances and Quantity of Dangerous Substances | % 4: 200

25 Hazardous Substances Subject to Special Control

Waste 26 Designated 27 Workplace 28 Municipal

29 Coating VOC value: 30 500.0 g/l 31 50.00 % 32 Wood preservative

33 500.0 g/l

34 50.00 %

35 50.00 %

[Esc] [Epd] [Ctrl F4] Calculate the WHC (D) [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 X] Ingredients Annex XVII [Ctrl R] Registry numbers

Step 3: Creating the first ES from the editing screen of the SDS

Click on **Section X**

The screenshot shows a software interface for editing an SDS. The left sidebar contains a list of sections with checkboxes and expand/collapse icons. The sections are: Technical function, Application of the substance / the mixture (checked), Uses advised against, 1.3 Details of the supplier of the safety data sheet (checked), Manufacturer/Supplier: (with sub-fields for Chemix GmbH, Chemixstraße 17, A-5020 Salzburg, and Tel. 0043/662/21 22 23), Further information obtainable from: (with sub-field for Product safety department), 1.4 Emergency telephone number: (checked), 2 Hazards Identification (highlighted in blue), 2.1 Classification of the substance or mixture (checked), and Classification according to Regulation (EC) No 1272/2008. A green box highlights the 'X' icon in the right margin next to the '2 Hazards Identification' section.

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 'Annex: Exposure scenario' form. The fields are: 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 (with a note: See section 1 of the annex to the Safety Data Sheet.), Conditions of use, Durations 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 the gas/vapour/aerosol.).

Step 4:

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

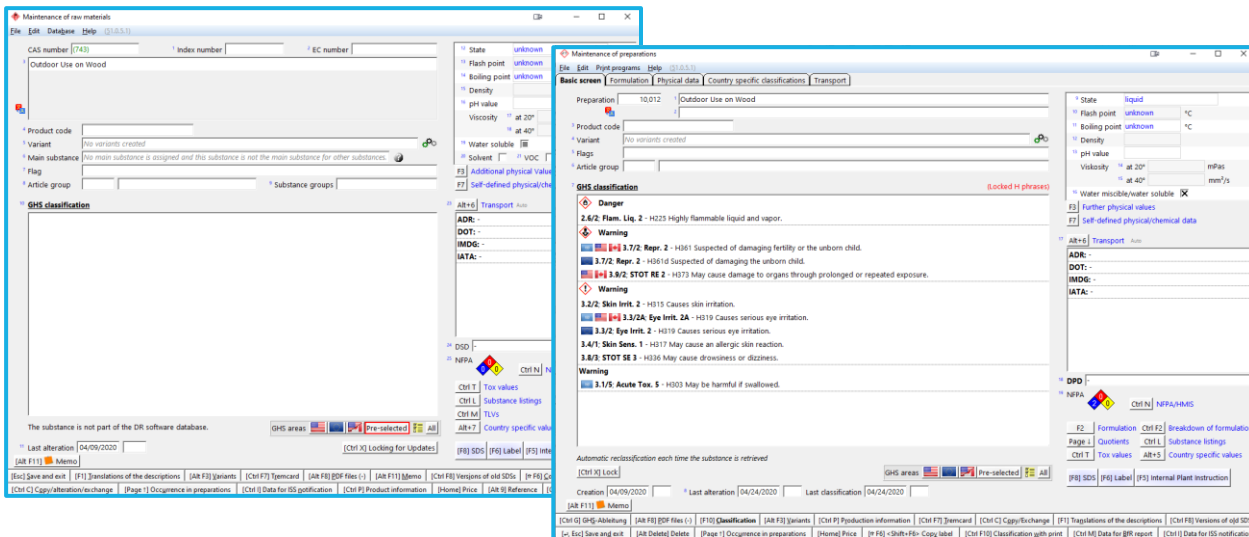
Example

- ▶ 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

Step 5: Creating Dummy Substances:

New raw materials (pseudo-CAS numbers) AND/OR New preparations



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

Note:

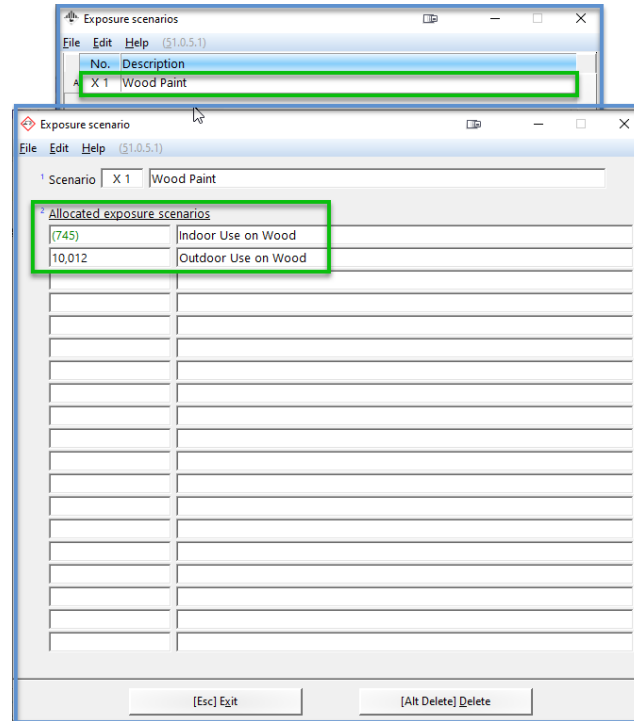
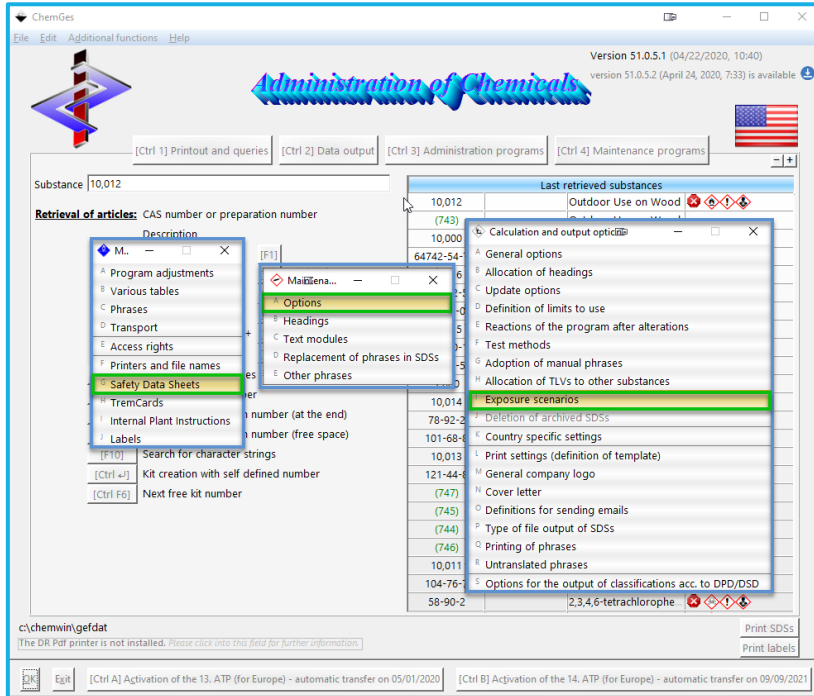
- The ESs from these substances can be used interchangeably.
- Raw material ESs for preparations and vice versa .
- They can also be mixed. Use as needed.

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"/>	5 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

Creation of ES-Groups:

Ctrl **4** Maintenance Programs – Safety Data Sheets – Options – Exposure Scenarios



Step 7:

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

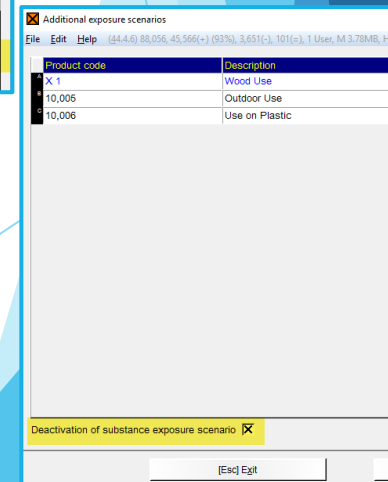
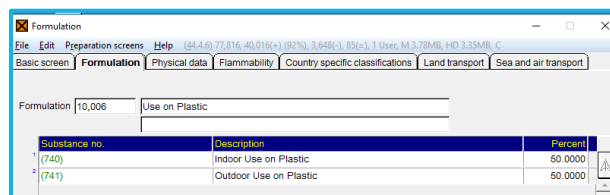
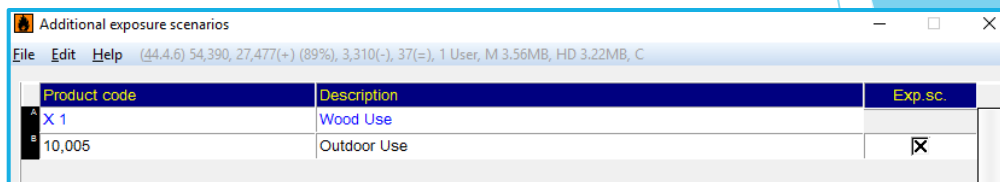
Ctrl X Additional exposure scenarios (2)

Enter the Templates to link

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

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

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



Step 8: Further Automation: Linking Phrases

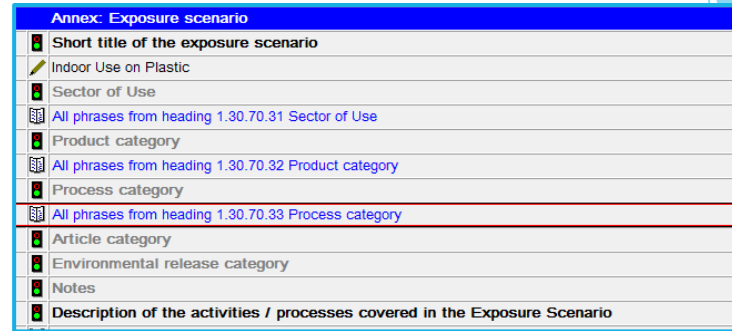
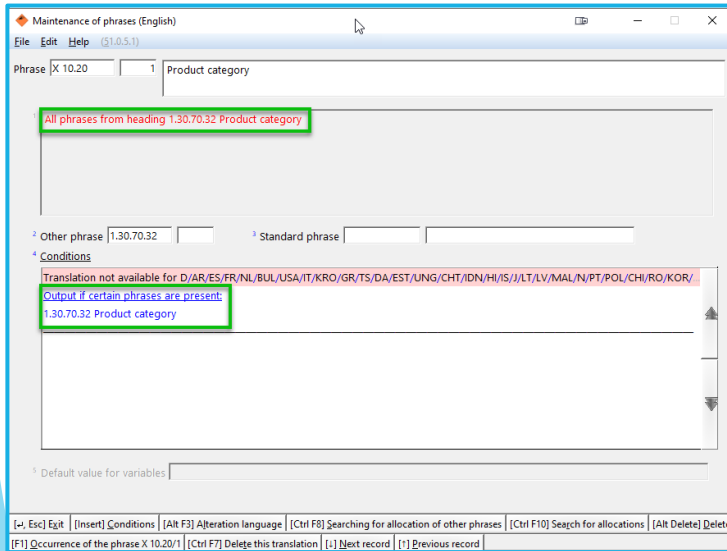
The data in the SDS must correspond to the data in the ESs.

This can be automated via conditions.

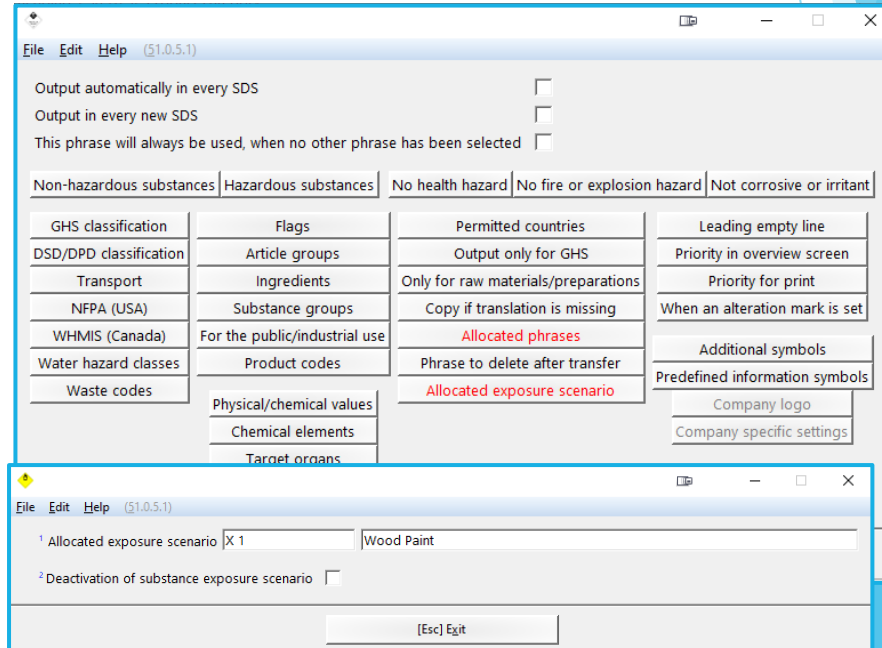
Fill in Data for each Template and the corresponding Data in the SDS.

**Ctrl 4 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

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