

Chesar training
Box 4




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Content

- Introduction on Exposure scenario
- Box 4: Exposure scenario building
- CSR generation




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Box 5 -> Exposure scenario building



1. Manage substances (IUCLID/Chesar)
2. Reporting of uses (in Chesar)
3. Manage assessment
4. **ES building and CSR generation**
5. Generation of ES for extended SDS
6. Administration tools



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What is an Exposure scenario?

- ESs are required under REACH for substances
 - Manufactured or imported in quantities > 10
 - Classified as dangerous
 - Assessed to be PBT/vPvB
 - Exposure considerations (annex VIII-X col 2)
- It is a set of information describing the OC/RMM under which the **risks** arising from a use of a substance **can be controlled**



Exposure scenario in Chesar

- The Exposure scenario refer to a **Stage**
- The default structure of an Exposure scenario for a specific stage, is based on **Contributing scenarios (CS)** for **Environment** and **Worker/Consumers**



What is a Contributing scenario

- A **contributing scenario (CS)** is a set of OC/RMM reflecting safe conditions of use
 - For the environment
 - For a given use for workers /consumers
- An Exposure scenario contains as default structure:
 - **One** contributing scenario for the ENVIRONMENT
 - **One** contributing scenario for each use (for WORKERS /CONSUMERS)



Exposure scenario and CSs

- For workers/consumers the CS is built from a selection of assessment for all routes of exposure and type of effect that have to be assessed
- When creating an Exposure scenario, by default the following is used:
 - For the CS for the environment: set of conditions of use related to the release estimation as well as standard EUSES determinants
 - For each CS for workers/consumers: in case more than one exposure assessment is carried out per route of exposure/type of effect, Chesar selects (by default) the assessment having
 - The **lowest RCR** (in case of quantitative risk characterisation)*
 - The **first available exposure assessment** (in case of qualitative)*

* The default can always be modified by the user!



For example...

Scenario	Method	Exposure	RCR
Inhalation			
Acute_Local	Not required		
Acute_Systemic	Not required		
Long term_Local	Not required		
Long term_Systemic			
TWA	TWA workers	2.754 mg/m ³	0.318
Short-term worker	External exposur...	1 mg/m ³	0.333
Dermal			
Acute_Local	Not required		
Acute_Systemic	Not required		
Long term_Local	Not required		
Long term_Systemic			
TWA	TWA workers	0.137 mg/kg	0.02



Exposure scenario and CSs

- Exposure estimates and risk characterisation are related to each CS
- It is possible to associate “supportive exposure assessments” to each CS, in order to bring additional evidence to exposure estimation (only relevant for the CSR)



How an ES looks like in Chesar

The screenshot shows a hierarchical tree of an Exposure Scenario (ES) in Chesar. The main structure is as follows:

- 9. Industrial spray coating with waterborne products
 - 9.x Exposure scenario
 - 9.x.1 Additional information on content and scope of the ES
 - 9.x.1.1 Control of environmental exposure - <Processing aid in industrial spraying of water borne products> (Callout: CS for environment)
 - 9.x.1.2 Control of workers exposure - <closed mixing> (Callout: CSs for workers)
 - 9.x.1.3 Control of workers exposure - <open mixing>
 - 9.x.1.4 Control of workers exposure - <cleaning of equipment manually>
 - 9.x.1.n Control of workers exposure - <cleaning of equipment manually>

Callouts in the image explain:

- systematic numbering of the ES:** Points to the '9.' prefix.
- title of ES:** Points to the main title 'Industrial spray coating with waterborne products'.
- overview of the uses covered in the exposure scenario:** Points to the 'Market sector', 'Sector of use', and 'Environment' descriptions.
- list of Contributing Scenarios (CSs) detailing the safe conditions of use:** Points to the '9.x.1' section.
- CS for environment:** Points to '9.x.1.1'.
- CSs for workers:** Points to '9.x.1.2'.

Overview of BOX 4

- Prerequisites:
 - A substance is in Chesar (box 1)
 - The substance has a defined life cycle tree (box 2)
 - The assessments for the stage and uses have been carried over (Box 3)
- Note:

If not all stages are assessed, the **regional concentration** for a stage is not final...the suggestion is to carry over all assessments before building the ES

Windows organisation

The screenshot shows the Chesar 1.0 interface with three numbered callouts:

- 1 Life cycle / Exposure scenario area:** Points to the 'Life Cycle Tree' window showing a tree structure of stages like 'Manuf. Imp.', 'Manuf. Manufacture', 'Market Sec. Coating', 'Form. Formulation', 'Ind. Industrial', and 'Prof. Professional'.
- 2 Assessment result area:** Points to the 'Assessment' window showing a table with columns for Method, Exposure, and RCR. It lists results for 'Water' (Fresh Water, Petagic, Sediment, Marine Water) and 'Air' (Dust).
- 3 Exposure scenario building area:** Points to the 'Exposure Scenario Building' window showing a list of contributing scenarios like 'Form. Formulation stage', 'Mixing', 'Loading/unloading', and 'Transfer'.

Contributing scenarios can be modified!

A CS can be :
Deleted
Renamed
Modified (drag and drop)

The screenshot shows a software interface with a tree view on the left and a table on the right. The tree view is expanded to show 'Contributing Scenarios' under 'Industrial painting 1'. A red box highlights a scenario 'Painting - Long-term (zone: The workers)' with a red arrow pointing to it. A yellow box with the number '1' points to the scenario name. A red arrow points from the scenario to a yellow box with the number '2' and the text 'drag and drop to contributing scenario'. Another red arrow points from the scenario to a yellow box with the number '3' and the text 'arrow to the question that the new exposure assessment is used for the ES'. A red arrow points from the scenario to a yellow box with the number '4' and the text 'assessment is repeated'. A red arrow points from the scenario to a yellow box with the number '5' and the text 'assessment is repeated'. The table on the right shows a list of scenarios with columns for 'Worker', 'Area', 'Level', 'Long-term', 'Short-term', and 'Total'. The 'Painting - Long-term (zone: The workers)' scenario is highlighted in blue.

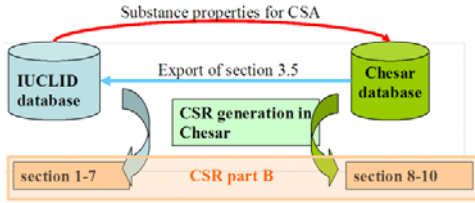
How the CS is displayed in the ES tab: ENV

The screenshot shows the 'ENV' tab in the software interface. The left pane shows a tree view with 'ENV' expanded to 'Control of environmental exposure formulation'. A red box highlights the 'Control of environmental exposure formulation' section. A red arrow points from this section to a yellow box with the text 'red box indicates the corresponding contributing scenario'. A red arrow points from the 'Control of environmental exposure formulation' section to a yellow box with the text 'default parameters and their values'. The right pane shows a table with columns for 'Worker', 'Area', 'Level', 'Long-term', 'Short-term', and 'Total'. The 'Control of environmental exposure formulation' scenario is highlighted in blue.

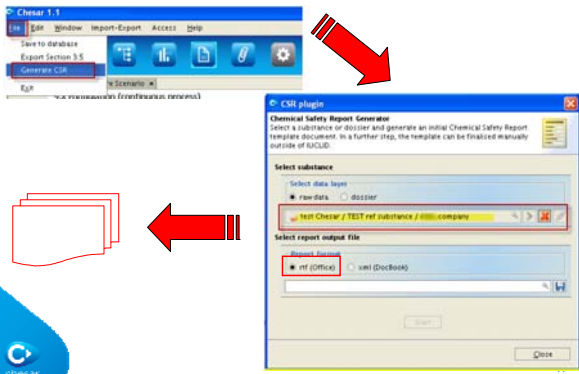
Worker/consumer contributing scenarios

The screenshot shows the software interface with a tree view on the left and a table on the right. The tree view is expanded to show 'Contributing Scenarios' under 'Worker/consumer'. A red box highlights a scenario 'Worker/consumer - Long-term (zone: The workers)' with a red arrow pointing to it. A yellow box with the number '1' points to the scenario name. A red arrow points from the scenario to a yellow box with the number '2' and the text 'drag and drop to contributing scenario'. Another red arrow points from the scenario to a yellow box with the number '3' and the text 'arrow to the question that the new exposure assessment is used for the ES'. A red arrow points from the scenario to a yellow box with the number '4' and the text 'assessment is repeated'. A red arrow points from the scenario to a yellow box with the number '5' and the text 'assessment is repeated'. The table on the right shows a list of scenarios with columns for 'Worker', 'Area', 'Level', 'Long-term', 'Short-term', and 'Total'. The 'Worker/consumer - Long-term (zone: The workers)' scenario is highlighted in blue.

CSR generation: the principles



CSR generation



CSR ...what comes from where...

CSR section	Source of information compiled to generate the CSR
Part A	Default text
Part B Section 1 to 7	IUCLID data set
Part B section 8	Box 1 PBT tab
Part B section 9	Section 9.x.1: Exposure Scenarios Box 4: Exposure Scenario (see section 0) Section 9.x.2: Exposure Estimation Box 3: Exposure tab For supportive exposure estimates: selection in Box 4 Box 3 Exposure tab Box 3 OC/RMM when relevant
Part B section 10	Box 3 Risk Characterisation tab Box 4: Combined RCR

**Thank you for your attention
Questions?**