

Definitions & General Concept (1)

- REACH defines a “use” (roughly spoken) as any activity with a substance as such or in a mixture.
- In a Chemical Safety Report (CSR) all identified uses of a substance are to be addressed, and the whole life cycle of the substance related to these uses is to be covered
- Reporting of identified uses needs to be done in a **systematic and structured** way, in order to enable efficient, complete and transparent assessment. Structured reporting of uses also facilitates communication with the different groups of downstream users.
- use descriptor system given (and explained) in **Chapter R.12** of ECHA's Guidance



Use descriptor system

- The use descriptor system is based on **five separate descriptor-lists** which in combination with each other support a brief general description of use
 - **Environmental release category (ERC)**: conditions of use from the environmental perspective
 - **Process category (PROC)**: application / process defined from the occupational perspective
 - **Sector of use category (SU)**: sector of the economy in which the substance is used
 - **Chemical product category (PC)**: chemical products (mixtures) in which the substance is finally contained when supplied to end-uses
 - **Article category (AC)**: article into which the substance has eventually been processed



Definitions & General Concept (3)

- Some descriptors can be used as entry points for exposure estimation for the Tier 1 exposure estimation tool plugged into Chesar, enabling a derivation of a default conservative exposure/release estimate:
 - **PROC** for industrial/professional uses: **ECETOC TRA workers**
 - **ERC** for environmental prospective: **default conservative release estimation**
 - **PC/AC** for consumer uses: **ECETOC TRA consumers** (not yet implemented)



The life cycle tree in Chesar

- **basic life cycle stages***
 - **manufacture**
 - **formulation**
 - **end use** for the 3 main user groups (workers industrial/professional and consumers)
 - **service life** for the 3 main user groups (workers industrial/professional and consumers)
 - **uses**
 - are defined by **workers'** activities or **consumers' activities** with a substance or with an article containing that substance
 - Manufacture/import and market sectors are added to the main life cycle stages
- (*) **stage definition:** corresponds to a set of uses carried out in similar conditions of use with regard to the environment. One or more (specified) "stages" can be defined per main life cycle stage. "**Identified uses**" (to be reported in section 2.2 of the CSR) correspond to the "stages" defined at formulation and end-use level.



Main life cycle stages

1. **Manufacture**
2. **Formulation**
 - The substance is transferred and mixed with other substances in order to be placed on the market in a mixture
3. **Industrial end use**
 - The substance is used under industrial conditions by a downstream user (reaction on use, inclusion into matrix, i.e. technical fate of the substance)
4. **Professional end use**
 - The substance is used under non-industrial conditions by a professional DU
5. **Consumer end use**
 - The substance is used by consumers (private households)
6. **Service life stage (consumer)**
 - The substance has been processed into or onto an article during use (see main life cycle stage no. 3-5). The articles are "used" by consumers
7. **Service life stage (industrial workers)**
 - The article is further processed or maintained by workers under industrial conditions (i.e. semi finished to finished articles)
8. **Service life stage (professional workers)**
 - The article is further processed or maintained by workers under non industrial conditions (i.e. semi finished to finished articles)



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Elements of Life Cycle Tree (1)

Life Cycle Tree x | Worker View x | Consumer View x | Environment View x

Life Cycle

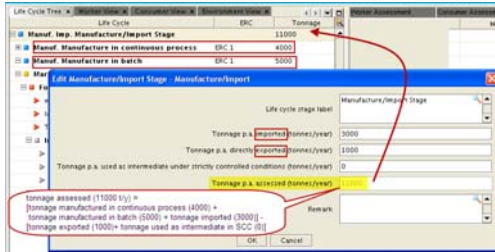
- Manuf. Imp. Manufacture/Import
 - Manuf. Manufacture stage [edit]
 - Process during manufacturing [edit]
 - Market Sec. Market Sector [edit]
 - Form. Formulation stage [edit]
 - Use related to formulation [edit]
 - Ind. Industrial end-use stage [edit]
 - Industrial use [edit]
 - Prof. Professional end-use stage [edit]
 - Professional use [edit]
 - Cons. Consumer end-use stage [edit]
 - Consumer use [edit]
 - Serv. Life (Cons.) Service life stage (consumers) [edit]
 - Article use (by consumers) [edit]
 - Serv. Life (Ind.) Service life stage (industrial workers) [edit]
 - Article use (by industrial workers) [edit]
 - Serv. Life (Prof.) Service life stage (professional workers) [edit]
 - Article use (by professional workers) [edit]



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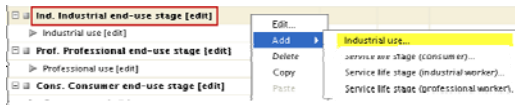
Manufacture/import „special“ stage

- Manufacture import



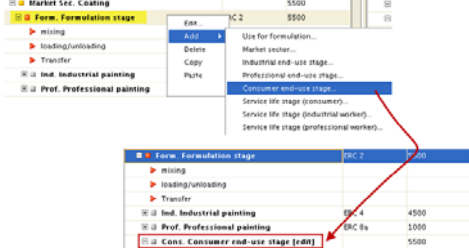
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functionalities of box 2 – add a new use



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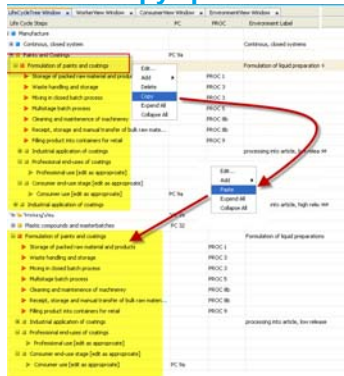
Functionalities of box 2 – add a new stage



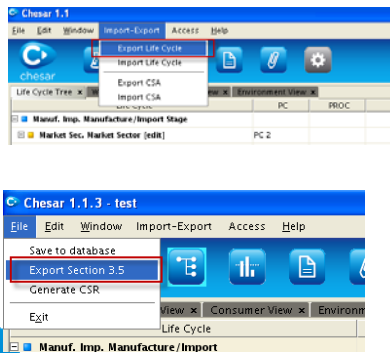
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functionalities of box 2 – copy&paste

- Copy and paste (save your time!)



functionalities of box 2 – import/export



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Link to box 3 - Assessment

- To enable the environmental assessment, the **tonnage** should be provided for each stage
- **ERC** should be provided at each stage in order to enable default release estimation and subsequent default exposure assessment
- **PROC/PC** should be provided for workers/consumer to enable default exposure assessment for human health

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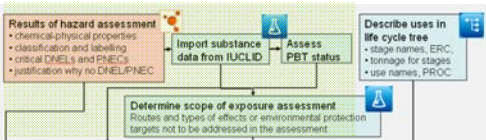
Link to box 4 – Exposure scenario

- The **stage label** is used in Chesar as a default name for the exposure scenario. The label should roughly reflect key conditions of use.
- The **use label** serves as the default name for contributing scenarios for workers and consumers
- The **environment label** serves as the default name for the contributing scenarios for the environment
- For an end use for which subsequent service life is relevant, a link between the ES for the end use and the ES for the service life is to be made.
 - The conditions of use during the inclusion of the substance into the article may impact on the release or exposure during subsequent service life



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General Workflow



Thank you for your attention
Questions?