

# Position Paper on the use of Chesar for the development of occupational exposure scenarios in the PGM Project

## 1 Introduction

The Chesar tool is an application that was developed by ECHA as the official “Chemical Safety Assessment and Reporting tool” that can be used for the development and/or reporting of exposure scenarios under REACH. By using this tool, specific sections of IUCLID are automatically completed and the CSR and exposure scenarios for communication (in an electronic exchange format and as a text document) are automatically generated. In addition, the so-called “scope of assessment” is assessed by Chesar, directly reflecting ECHA’s requirements set<sup>1</sup> for exposure assessments and risk characterisation.

## 2 Completion of IUCLID Section 3.5

The whole life cycle of a substance has to be considered for the development of exposure scenarios, starting with the manufacture of the substance of concern and also including service life scenarios of articles containing the substance of concern. This life cycle can easily be illustrated in Chesar by generating the so-called “life cycle tree”. In Chesar, it is possible to arrange uses of the substances under specific market sectors, as a reflection of the use of the substance in different industry sectors. As a very important point for the development of occupational exposure scenarios, by using Chesar it is possible to nominate one specific PROC multiple times in a given exposure scenario, e.g. PROC 8b for handling of solutions in one workplace and for handling of granules in another workplace. Distinction of these two handling steps, being potentially associated with different emission potentials and correspondingly different operational conditions (OCs) and risk management measures (RMMs), is currently not possible in IUCLID if Chesar is not used for the generation of Section 3.5.

## 3 Completion of IUCLID Section 3.7.1 (v5.4 and higher)

In order to pass the technical completeness check (TCC) in future<sup>2</sup>, Section 3.7.1 of IUCLID has to be completed with relevant information taken from the occupational exposure scenarios. When reporting the exposure assessment in Chesar, Section 3.7.1 can automatically be populated and all fields that are relevant in Section 3.7.1 of IUCLID for passing the TCC are completed. In contrast to IUCLID, Chesar is not only a database system but also an official ECHA tool to assess and/or report occupational exposure scenarios and related exposure assessments. Thus, by reporting exposure scenarios in Chesar, Section 3.7.1 would be filled as will be required by ECHA. Manual completion of these fields would not only be time-consuming but also bears the risk that information provided appears incomplete or erroneously. An excerpt of fields that are commonly to be completed in Section 3.7.1 of IUCLID is provided below:

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<sup>1</sup> ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard Assessment (v. 2.1, Dec. 2011, ECHA-11-G-16-EN), in particular Chapter B.8 thereof (Scope of Exposure Assessment)

<sup>2</sup> A precise date for the inclusion of IUCLID 3.7.1 is not yet given by ECHA.

**Conditions of use**

**Product (article) characteristics**

% (w/w) substance in mixture [article]

Other conditions of use

**Amounts used (or contained in articles), frequency and duration of use/exposure**

Duration of activity (hours/day)

Other conditions of use

**Technical and organisational conditions and measures**

Conditions of use

Route affected

Effectiveness (%)

**Conditions and measures related to personal protection, hygiene and health evaluation**

Conditions of use

Route affected

Effectiveness (%)

**Other conditions affecting workers exposure**

Place of use

Other conditions of use

Figure 1: Excerpt of IUCLID, Section 3.7.1 for worker contributing scenarios

It is noted that further fields may have to be added depending on the extent of the exposure scenario (ES) to be described. Additionally, the above provided fields have to be completed for each relevant process category (PROC) that is assigned to a specific use.

Since in current occupational ES for DDP as an example, specific PROCs are assigned to multiple workplaces for a given use/ES, such PROCs even need to be addressed repeatedly with different conditions of use. Without using Chesar, it would not be possible to appropriately address such multiple nominations of specific PROCs in a given ES. It is finally noted that the population of Section 3.7.1 will be done automatically with the aid of the so-called report generator plugin to IUCLID which is currently only available in beta-status<sup>3</sup> but will be finalised before Section 3.7.1 will be checked in TCC.

#### 4 Clear indication of the scope of exposure assessment

For the assessment of occupational exposure, the same methodology will be retained as was applied in the current exposure scenario for DDP for the relevant process categories (PROC). Chesar is thus exclusively used as a reporting tool whereas its assessment functionalities will not be used. Conclusions on the toxicity of PGM substances as reported in IUCLID Section 7 will automatically be used by Chesar when indicating the required scope of exposure assessment. This function of Chesar enables the user to explicitly focus on relevant exposure routes and types of effect. It also indicates if a quantitative or qualitative assessment is required and for which type and route of exposure, an assessment is not required. If no exposure route is associated with a hazard for human health, Chesar would conclude that an exposure assessment is not required at all.

<sup>3</sup> EBRC is involved in the currently on-going beta-testing.

## **5 Omitting copy-paste-errors and saving time**

Once the life cycle tree is developed in Chesar and all required information on OCs and RMMs is provided, Section 9 and 10 for the CSR and exposure scenarios for the extended safety data sheet (eSDS) can automatically be generated by Chesar. In addition, once the report generator plugin is available, information on RMMs is automatically used by Chesar to populate IUCLID Section 3.7.1<sup>4</sup>. Any future updates will therefore benefit to a considerable extent by omitting mistakes due to transferring information between documents partly containing redundant information (i.e. Section 9 & 10 of the CSR, Sections 3.5 and 3.7 of IUCLID and attachment eSDS). Any required update of information will only be done once in Chesar and can be automatically reflected in the mentioned documents.

## **6 Use of standard phrases**

Comparing ES for the CSR with those for communication, different type of information and level of detail is required. When using Chesar, exposure determinants are to be defined to appropriately reflect the conditions of safe use. Because of its database-like structure it is possible to assign industry-wide standard phrases to these determinants enabling an automatic generation of understandable and brief ES for communication which could easily be imported into standard enterprise resource planning (ERP) systems.

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<sup>4</sup> Please note that completion of Section 3.7 will not be mandatory before the report generator plugin is available.