

## 4.1 Guidance

# Set up a chemicals inventory

This document is part of the *International Chemicals Management Toolkit for the Toy Supply Chain* developed by the United Nations Environment Programme (UNEP) in collaboration with the Baltic Environmental Forum (BEF) within the framework of the Global Environment Facility (GEF) project ID: 9771 on Global Best Practices on Emerging Chemical Policy Issues of Concern under the Strategic Approach to International Chemicals Management (SAICM).

### Introduction

This guide supports companies in building up and maintaining a chemicals inventory. A chemicals inventory includes information about all chemicals that are used or that are contained in input materials, including parts of toys and product components. Chemicals inventories are an important tool for compiling, managing and analysing information on chemicals in the company.

The target audience of this guide are producers of polymer plastic pellets that will be used to produce toys as well as producers of toys and toy parts from plastic pellets. Assemblers of toys may also use an inventory to structure the information on the content of chemicals of concern in their input materials (mainly toy parts).

The inventory connects to all other sections presented in the toolkit:

- It should list all raw materials and can therefore be used to assess if chemicals of concern (CoCs) are included in toys or toy parts
- Based on the list of used chemicals, it can be more easily identified if the own products comply with all relevant [legal requirements](#)
- The chemicals inventory helps to organise the information on chemicals in input materials and structures [communication with the suppliers](#)
- The inventory helps [prioritising chemicals for action](#)
- The inventory links input materials with the produced (toy) products and thereby facilitates informing the customers about chemicals in products.

A chemicals inventory is a tool enabling a systematic approach to managing information on input materials purchased and used in a company and linking it to the products. Input materials can include substances (elements and compounds), mixtures, such as lacquers, additives, polymer blends, or goods or product parts such as the hair of dolls, wheels of children's play cars etc. The inventory lists all input materials and specifies the content of chemicals of concern in them, as far as they are known or can be obtained from the supplier. Which chemicals are included into the inventory depends on several factors, including the company's chemical management strategy, supply chain requirements or legal obligations.

The chemicals inventory provides information that is needed to check and ensure that products (a toy or an input material for a toy) are safe and fulfil all chemical-related requirements of the target markets. With this, the chemicals inventory builds the foundation of any systematic chemicals management system.

As the inventory links the input materials to the final products, it can easily be seen which chemicals (from the input materials) end up in which products and [chemicals of concern](#) can be prioritised for taking action.

The chemicals inventory can also be used to support other tasks, which are not relevant for toy safety but include workers' safety and health, environmental emissions, safety of the installation and potential emergency plans, etc.

In the optimal case, the inventory should list all relevant chemicals in all input materials. As suppliers often only identify chemicals that have [hazardous properties](#) in their chemical products, the 'list of ingredients' of chemical products normally is not complete. The chemicals inventory should include the following information per input material:

- 1) the name and type of the input material (substance, mixture, raw material/ good)
- 2) all chemical substances that the [supplier identifies \(upon request\)](#) in the composition of input material (mixture/input material) and for each of these
  - a. CAS number
  - b. Concentration or concentration range in the mixture /input material/ good
- 3) the producer/supplier of the input material
- 4) date of input material documentation and location where the documents are archived
- 5) whether the chemical remains in the final product or is e.g. a processing auxiliary
- 6) type of hazard (GHS hazard statements)
- 7) regulatory status of chemicals

## Setting up a chemicals inventory

The following step-by-step guidance can be implemented using the [excel inventory template](#) (MS Excel). Please note that the toolkit only provides a template for an inventory, but each user has to fill in his specific information, i.e. which raw materials are used and which products are produced.

List all chemical substances, mixtures and input materials used in the company, e.g. dyes, paints, adhesives.

### 1) **List the name of the input material – substance, mixture or raw material**

If the input material is a chemical, chemical compound or substance, list the substance (element, compound, e.g. a monomer).

If the input material is a mixture of chemicals (e.g. a glue or a solvent mixture) **list all chemicals or substances in the mixture** that are identified in the available product documentation (product label, data sheets etc.) or that you have identified by speaking to your supplier. The priority must be given to hazardous chemicals.

Advanced issue: there may be impurities and contaminants [#Section 1.9 Guidance impurities](#) in substances, mixtures and materials, which may be CoCs and have never been **intentionally added**. Therefore, they are not listed in an MSDS if the concentrations are below certain limits (e. g. according to the GHS).

Therefore, and if you suspect that CoCs may be contained that are relevant for your compliance or customer demands, you may request more detailed information, in addition to the information provided by your supplier on a routine basis.

If the input material is a raw material (wood, wool), be mindful of [chemicals that could stem from any pre-treatment or processing](#) (e.g. biocides from anti-moth treatment of wool)

2) **Include the CAS number of all identified substances**

You can find the CAS number in the technical documentation you have from your supplier, e.g. catalogue, documents of supply, technical data sheets or safety data sheets

If you have only the chemical's name:

you may enter it into different databases, for example, eCHEM portal by OECD, [Chemical Substance Search \(echemportal.org\)](#); European Chemicals Agency (ECHA) database, [Information on Chemicals - ECHA \(europa.eu\)](#), to retrieve the CAS number. If you only have the CAS number, you can find the name of your chemical by searching the same databases.

3) **Indicate the concentration / concentration range of the substances in the input materials**

You may find the concentration of the substance in the input materials in the technical documentation you have from your supplier, e.g. catalogue, documents of supply, technical documents or safety data sheet. It is not unusual for these documents to only provide a concentration range for individual chemicals, and you may decide if you include the upper value (worst case) or an average value into the inventory.

The concentration may be needed to check if your products comply with legal limit values, therefore it is recommended to include the maximum concentration in any case.

4) **Indicate the producer/supplier of the input materials (name and contacts)**

This allows you to [contact suppliers](#) if necessary (for example, to request some missing information)

Optional: You may have several suppliers of one input material or one supplier of several materials. In the former case, it may be interesting to compare the technical documentation of the products.

5) **Indicate the date of the last revision of the product documentation and where the information is stored in your company (files, databases etc).**

This allows you to check if information is up-to-date and ensure that also other persons can find the information sources.

6) **Indicate into which finished product the substance is included (or if it is not part of a product)**

Some substances in input materials are not included in the final product, e.g. solvents<sup>1</sup>. If only the safety of toy end-users is considered, these substances can be disregarded, as the potentially remaining residues are unlikely to cause harm. Such substances are relevant, however, if workers safety and health aspects are assessed.

The references to the final product of your company (which substances are included from the input materials) must be specific. You may use your internal product identifiers. This allows you to search the inventory for a particular product, e.g. if you get a specific request from your customers. Only a clear link between specific input materials and specific products allows tracking where chemicals (of concern) are contained.

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<sup>1</sup> For example, Formamide (as decomposition product from blowing agent ADCA) is a CoC and can remain as residue in significant amounts

## 7) **GHS hazard statements**

The inclusion of GHS hazard statements for the chemicals (compounds and elements) allows you to recognize what type of hazards the chemicals could have and, to some extent, also to predict potential future legislation. The GHS hazard classification is a good indicator of concern.

- You may be able to find GHS hazard statements in the technical documentation you have from your supplier, e.g. his catalogue, documents of supply, technical documents or safety data sheets
- You can also check databases to find information on the classification and hazard statements: search by name or CAS no of your chemical in the following databases:
  - eCHEM portal by the OECD, [Classification Search \(echemportal.org\)](https://www.chemportal.org/)
  - European Chemicals Agency (ECHA) C&L inventory, [C&L Inventory - ECHA \(europa.eu\)](https://echa.europa.eu/)

## 8) **Regulatory status**

Include if legal requirements exist for substances, e.g. concentration or migration limits or labelling requirements and in which legislation [#2.1\\_Guidance legislation](#).


It's always a challenge to follow all changes in legislation, where amendments may introduce new substance restrictions or change the limit values.

Continuous monitoring of legislation [#2.4 Guidance Staying up to date](#) is needed together with reading newsletters and a certain information system with the suppliers.

# Chemicals inventory tools

There are several [types of \(electronic\) tools](#) that support building up and maintaining a chemicals inventory. They range from simple excel-sheets to complex (integrated) IT solutions and software tools, which are available commercially and provided by large IT firms.

In this toolkit, a [template of a chemicals inventory](#) (MS Excel) is provided and [an example](#) that illustrates how the template can be filled.

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|  | <p>A comprehensive and complete chemicals inventory can be used as a benchmark for making improvements on a continual basis.</p> <p>Further inspiration for using the chemicals inventory is <a href="#">provided here</a>.</p> |
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# References

OECD eCHEM portal (2021). Chemical Substance Search.

<https://www.chemportal.org/chemportal/substance-search>. Accessed 16 December 2021.

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