

Short Introduction into the EHS Assessment Tool

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General Issues

The program is a microsoft Excel file using macros. Therefore, macros have to be enabled and security settings have to be set accordingly.

Selection of Chemicals to be Assessed

Chemicals are selected by checking the corresponding checkbox.

A maximum of 10 substances can be assessed in one run. The red counter indicates how many substances are already selected for assessment. Using the 'Reset Substances' button one can deselect all substances already selected. Assessment of more than 10 chemicals has to be done in separate runs.

Searching for Chemicals

Chemicals can be searched by substance name, CAS number, or UN number. Please note that synonyms for substance names exist; these are not considered in the tool. Therefore, searching by CAS or UN number is recommended in order not to miss a substance that is actually included in the tool. Please note that CAS numbers have to be entered without dashes (i.e. enter only the sequence of numbers).

Substance Volume

At this stage the volume entered for a certain chemical only serves documentation purposes and is not included in any calculation; the volume is displayed in results plots and tables.

A volume has not to be entered at all or for any chemical; a reminder will pop up if no volume is specified for at least one chemical. Using the 'Reset Volume' button one can delete all volumes already entered.

Calculation

After selecting up to 10 chemicals the assessment results are calculated by pressing the '>> Calculate Results' button.

Automatically a plot pops up showing the overall assessment results; one can display the results in different form (see below) or select different substances for assessment using the '<< Back to Selection' button. By pressing this button all calculated results are cleared.

Results Presentation

The results can be displayed as graphs or tables which can be copied to other programs such as Word or Power Point.

The graphs show either the overall results or the detailed results for safety, health, or environmental aspects separately.

The simple results table shows only the index values resulting from the assessment while the detailed table option also displays the underlying physical or other parameter, its value, and the data source.

The overall results plot is the default. After checking the corresponding radio button and pressing either the 'Show graph' or 'Show table' button a different form of results is displayed.

Saving Results

Results can be saved using the 'Save results' button. The complete file including the assessment results of the selected chemicals is then saved by providing a different file name.

Documentation

The EHS assessment is based on the method by Koller et al., 2000, Industrial & Engineering Chemistry Research, Vol. 39: 960-972. Modifications and settings that are implemented in the tool and further information can be viewed by pressing the 'About this tool' button.

A complete documentation on how the index values are calculated from physical and other input data will be displayed using the 'Method Def.' button.

Further information and references can be found at <http://www.sust-chem.ethz.ch/research/process/ehs.html>.

Contact

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