

EFFECTS 8



EFFECTS is sophisticated, but easy to use software to assist you in performing safety analysis. It calculates the effects and consequences of the accidental release of hazardous materials.

Safety Analysis

EFFECTS is designed for anyone involved with the safe processing, handling and storage of hazardous materials. This advanced program provides safety professionals with an efficient software tool for hazard identification, safety analysis, safety control, quantitative risk analysis (QRA) and emergency planning.

In these areas EFFECTS is a valuable tool: it allows users to predict, calculate and present the physical effects of any accident scenario with toxic and/or flammable chemicals.

Transparency and traceability

As an independent research organization, TNO stands for transparency and traceability in the methods used for safety analysis. The "Yellow Book" provides solid scientific information and is recognized internationally as the standard reference work for consequence analysis. The 'Green book'² describes the relations between physical phenomena (heat radiation, explosion overpressure's, toxic doses) and resulting damage.

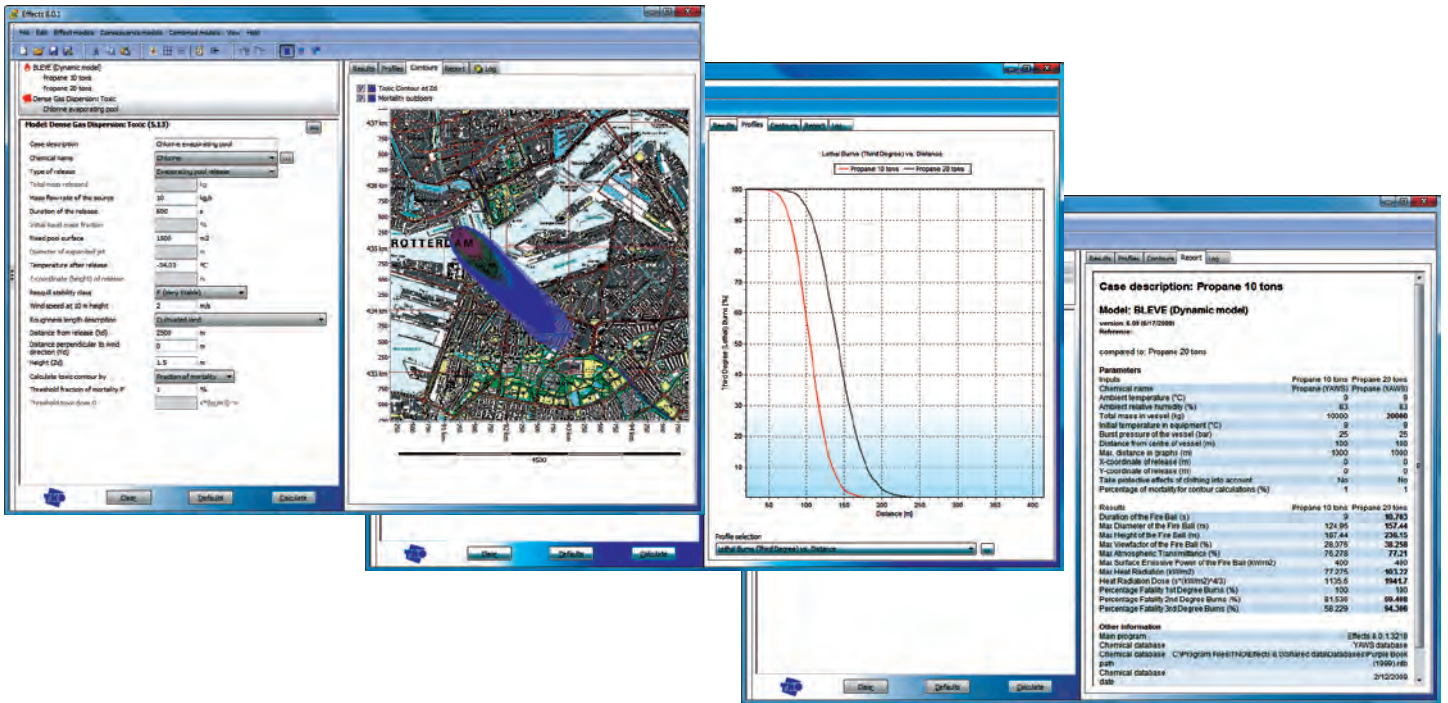
Models incorporated within EFFECTS are described in detail in these books, making the results both transparent and traceable.

Calculation models and chemical databases

EFFECTS offers a very large number of different calculation models. The following types of models are available:

- Release models
- Evaporation models
- Fire models
- Explosion models
- Dispersion models
- Damage models

It comes with a complete chemical database, containing toxic and flammable values and all thermodynamic properties. An additional database with over 1650 chemicals is available as an option. An integrated material editor allows the usage of your own chemicals.



The results are presented as maps, series of graphs and reports.

Ease of use

The user interface of EFFECTS 8 is suitable for both experts and occasional users. It offers 3 modes of operation (novice/normal/expert) and supplies default settings for all models. Furthermore it allows manual linking of calculation models in as much detail as you want, or have EFFECTS make the linking and decisions fully automatic for you. The results are presented as series of graphs, special reports and contours on maps. A sophisticated GIS tool is incorporated within the software, making it easy to overlay effect footprints over GIS drawings, Google Earth® screen captures or ESRI shape files. The Windows Vista® compliance, and Microsoft Office® integration speeds-up and further enhances the production of professional reports.

More information

For more information and a demo version of EFFECTS, please visit our web site www.tno.nl/effects

¹ 'Methods for the calculation of Physical Effects' (The Yellow book), Committee for the Prevention of Disasters, CPR 14E / PGS2, 2nd rev. print, (2005)
² 'Methods for determination of possible damage' (The Green book), Committee for the Prevention of Disasters, CPR 18E / PGS1, 2nd edition (2005)



Industrial & External safety

EFFECTS is designed for all those concerned with safety processing, handling and storing hazardous materials.

TNO Industrial & External safety

Princetonlaan 6
 PO Box 80015
 3508 TA Utrecht
 The Netherlands

T +31 88 866 21 11
 F +31 88 866 20 50

info.effects@tno.nl

tno.nl/effects

