

## CAMEO®

Placing accurate, timely information in the hands of decision makers is vital to a safe, effective response to a chemical incident.

Designed to assist first responders and emergency planners get key information quickly, CAMEO (Computer-Aided Management of Emergency Operations) is a suite of four software programs: CAMEO, CAMEO Chemicals, ALOHA®, and MARPLOT®.

### How the CAMEO Software Suite Works

All programs work interactively to display critical information in an easy-to-understand fashion. You can use the suite to:

- Manage data for emergency planning and response (including facilities, chemical inventories, contact information, and response resources).
- Access chemical property and response information.
- Find out how chemicals would react if they mixed.
- Estimate threat zones for hazardous chemical releases, including toxic gas clouds, fires, and explosions.
- Map threat zones and other locations of interest.

**CAMEO Chemicals**

Home | Help

Search Chemicals  
New Search  
Modify Search  
Search Results

MyChemicals  
chemicals: 0  
View MyChemicals  
Predict Reactivity

**Chemical Datasheet** [Add to MyChemicals](#) [Print Friendly Page](#)

**CHLORINE**

[Chemical Identifiers](#) | [Hazards](#) | [Response Recommendations](#)  
[Physical Properties](#) | [Regulatory Information](#) | [Alternate Chemical Names](#)

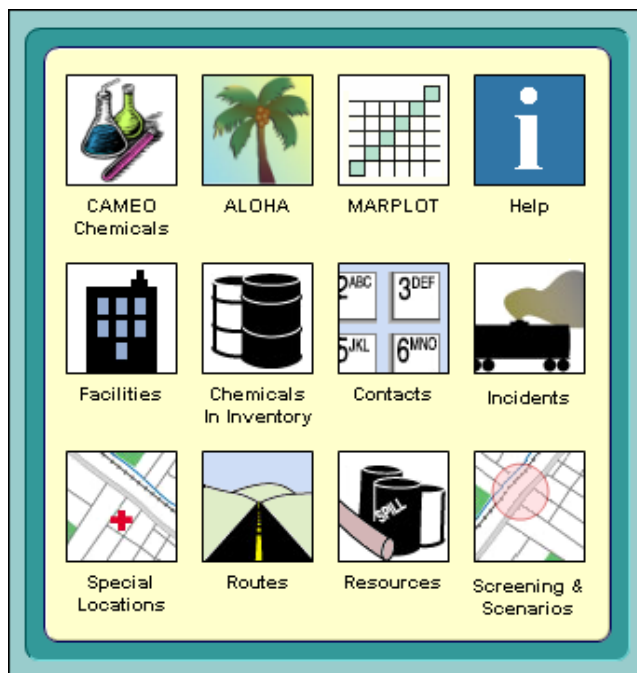
**Chemical Identifiers**  
[What is this information?](#)

UN/NA Number	CAS Number	CHRIS Code	DOT Hazard Label
1017	7782-50-5	CLX	POISON GAS CORROSIVE

NFPA 704: Red 0 -- Flammability: Will not burn

The chemical datasheet for chlorine includes response recommendations and physical properties.

CAMEO is developed jointly by the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Environmental Protection Agency (EPA).



CAMEO's Home screen provides easy access to the CAMEO data management modules and other programs in the suite.

### CAMEO Data Management Modules

Keep track of information related to emergency response and planning using CAMEO's eight data management modules.

For example, you can store information about the chemical facilities in your community, including contact information and chemical inventories. Once you've entered your data into CAMEO, you can use the other programs in the suite to:

- Link the records about facilities and other locations to symbols on a MARPLOT map. This will allow you to quickly get to your data from CAMEO or MARPLOT.
- Find out more about the chemicals in inventory by looking in CAMEO Chemicals to get response recommendations and physical properties, or use ALOHA to predict the threat zones (if the inventory chemicals were released).

The CAMEO modules are especially useful for data management tasks required under the Emergency Planning and Community Right-to-Know Act (EPCRA).

## CAMEO Chemicals and Response Information



CAMEO Chemicals has an extensive chemical database with critical response information for thousands of chemicals.

- **Chemical datasheets** provide physical properties, health hazards, information about air and water hazards, and recommendations for firefighting, first aid, and spill response.
- **UN/NA datasheets** provide response information from the Emergency Response Guidebook and shipping information from the Hazmat Table (49 CFR 172.101).

You can also add chemicals to the MyChemicals collection to see what hazards might occur if the chemicals in the collection were mixed together.

**Note:** There is also an online version of CAMEO Chemicals, which is available at <http://cameochemicals.noaa.gov>. The online version has all of the same features as the downloadable version, but it can't share information with other programs in the CAMEO software suite.

## ALOHA and Threat Zone Plots



ALOHA can predict the area that could be affected by a toxic cloud, as well as potential threats from chemical fires or explosions. Graphical outputs include threat zone plots, threat at specific locations, and source strength graphs.

A threat zone is an area where a hazard (such as toxicity, flammability, thermal radiation, or damaging overpressure) has exceeded a user-specified Level of Concern.

Threat zones can easily be displayed in ALOHA or on a MARPLOT map. You can also import ALOHA's threat zones into ArcView and ArcMap using extensions that are available at [http://response.restoration.noaa.gov/aloha\\_arctools](http://response.restoration.noaa.gov/aloha_arctools).

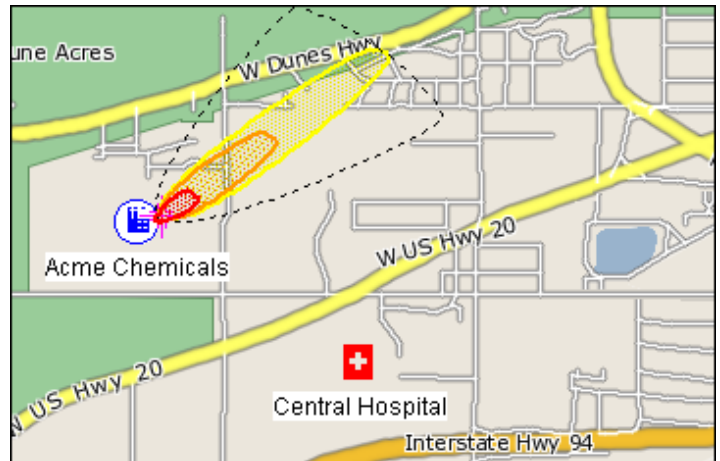
## MARPLOT and GIS-Compatible Output



With MARPLOT's easy-to-use GIS interface, you can quickly view and modify maps, and you can create your own objects.

When you display ALOHA threat zones in MARPLOT, you can get population estimates for the potentially impacted area. You can also check within the threat zone for facilities storing hazardous materials and locations of special concern (such as hospitals and schools).

Important data about these locations (such as emergency contacts, hours of operation, and chemical inventories) can be displayed in the CAMEO data modules to help you make decisions about the degree of hazard posed by the incident.



ALOHA threat zone (near the chemical facility object) displayed on a sample MARPLOT map.

## Getting CAMEO

To download any program in the CAMEO software suite free of charge, go to <http://www.epa.gov/emergencies/cameo>.

CAMEO runs on both Windows and Macintosh computers.

## CAMEO Contact Information

For additional information:

<http://response.restoration.noaa.gov/cameo>  
[orr.cameo@noaa.gov](mailto:orr.cameo@noaa.gov)

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*NOAA's Office of Response & Restoration—Protecting our Coastal Environment*

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**For further information about NOAA's Office of Response and Restoration,  
please call (301) 713-2989 or visit our Web site at  
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