

CAMEO® Software Suite

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 to key information quickly, the CAMEO (Computer-Aided Management of Emergency Operations) software suite has four core programs: CAMEO Data Manager, CAMEO Chemicals, ALOHA®, and MARPLOT®.

How the CAMEO Software Suite Works

All programs work interactively to display critical information in an easy-to-understand manner. 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 could 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.

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

CAMEO Data Manager



Keep track of information related to emergency response and planning for hazardous chemicals using CAMEO Data Manager's seven database modules: Facilities, Contacts, Chemical Inventory, Incidents, Special Locations, Routes, and Resources.

Report Year: 2020 Site: of Shipper:
 Facility Name: Allied Business Group
 Location where chemicals are present
 Street Address (where hazardous materials are present)
 Street: 123 Main St
 Cross Street:
 City: Seattle
 State: WA Zip: 98104
 County: King
 Fire District: 12
 Country: USA
 Department: Safety Management
 Latitude and Longitude
 Latitude: 47.594602 Longitude: -122.323542
 Mailing Address
 Street: PO Box 526
 City: Seattle
 State: WA Zip: 98104
 Map view displays the facility location based on the data you enter; other nearby CAMEO Data Manager records can also be shown.

A facility record with the location data section shown. A map view displays the facility location based on the data you enter; other nearby CAMEO Data Manager records can also be shown.

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 Data Manager, you can use the other suite programs 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 Data Manager 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).

CAMEO Chemicals
 Home Help
 Search Chemicals
 New Search
 Modify Search
 Search Results
 MyChemicals
 chemicals: 0
 View MyChemicals
 Predict Reactivity
 Mobile Site
 Download on the App Store
 Chemical Datasheet
 Add to MyChemicals Print Friendly Page
 CHLORINE
 Chemical Identifiers
 CAS Number: 7782-50-5 UN/NA Number: 1017 DOT Hazard Label: Poison Gas, Oxidizer, Corrosive USCG CHRIS Code: CLX
 NIOSH Pocket Guide: Chlorine International Chem Safety Card: CHLORINE
 NFPA 704

Diamond	Hazard	Value	Description
0	Health	4	Can be lethal.
0	Flammability	0	Will not burn under typical fire conditions.

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

This program is 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 (ERG) and shipping information from the Hazmat Table (49 CFR 172.101). ERG Response Guide PDFs are available in English, Spanish, and French.

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

CAMEO Chemicals is available as a website, mobile website, desktop program, and a mobile app for smart phones and tablets. The full database of chemical information is available in all CAMEO Chemicals formats, but only the desktop format can share information with the other programs in the CAMEO software suite.

Note: The website formats are available from <https://cameochemicals.noaa.gov>, and you can download the mobile app for iOS devices on the App Store and for Android on Google Play.

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, threats 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 are displayed on a grid in ALOHA, and they can also be plotted on maps in MARPLOT, Esri's ArcMap (using MARPLOT to generate shapefiles for export), and Google Maps or Google Earth (using ALOHA's KML export feature).

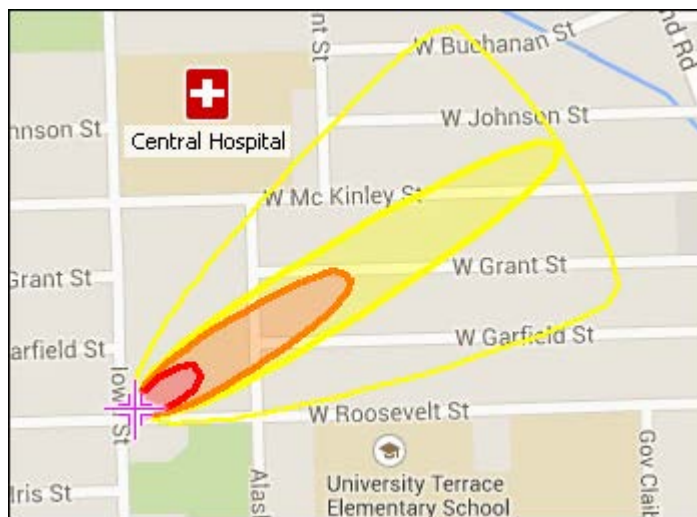
MARPLOT and GIS-Compatible Output



With MARPLOT's easy-to-use GIS interface, you can add your own objects to maps, as well as view and edit data associated with those 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).

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



A sample MARPLOT map with a tricolored ALOHA threat zone estimate displayed near a symbol object representing a hospital.

Getting CAMEO

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

CAMEO suite desktop programs run on both Windows and Mac computers.

CAMEO Contact Information

For additional information:
<https://response.restoration.noaa.gov/comesuite>
orr.cameo@noaa.gov

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

For further information about NOAA's Office of Response and Restoration,
please call (206) 526-6317 or visit our website at
<https://response.restoration.noaa.gov>

