



# HazRAE

## Chem/Bio/WMD/Rad Decision Support

### PDA- and PC-based Searchable First Responder Database

Developed specifically to address the unique needs of first responders, HazRAE is the most complete hazardous materials decision support application for chemical, biological, radiological and WMD assessments. HazRAE is the only tool of its type to be approved under the US Department of Homeland Security's SAFETY Act as an Effective Anti-Terrorism Product.

#### 96,000 Materials

HazRAE includes integrated response information for more chemical agents (TICs, TIMs, CW agents), biological agents (bio-weapon and bioterror agents), radioactive materials, improvised explosive devices and detonators than all the other legacy systems combined!

#### Searchable Database and Unknown Material Identification

HazRAE's materials database can be searched using traditional identifiers such as name, UN or CAS number. HazRAE can also search for and identify unknown materials by physical properties, such as color and odor, or by the symptoms of victims of exposure.

#### Improvised Explosive Devices

HazRAE provides Improvised Explosive Device (IED) and Improvised Nuclear Device (IND) standoff distances and evacuation calculators.

#### Responder Assessments

HazRAE provides guidance for responding to incidents using its patent-pending signature library of 780,000+ attributes:

- Identify a broad range of dual-use precursors and model outcomes
- Virtually mix agents and model their chemical reactions
- Identify agent-specific protective clothing and respirators for an incident
- Identify Correction Factors for RAE Systems 9.8 eV, 10.6 eV and 11.7 eV PID lamps used in MultiRAE Plus, MiniRAE 2000 and ppbRAE Plus
- Identify emergency life support/first aid guidelines for chemical, biological and radiological agents

#### International and Maritime

Ready for international and maritime operations, HazRAE displays units of measure in both imperial and metric units. It displays and decodes EAC, HIN, APP, PG and UN hazard codes, and includes trade names in German, English, French, and Spanish.

#### Key Features

- More than 150 fields containing physical properties, material hazard categories, decontamination procedures, working allowances, reactivity, Acute Exposure Guidelines (AEGs), Military Exposure Guidelines (MEGs), Levels of Concern (LOCs), and more
- Intuitive, full-color view of isolation distances and protective action zones
- Time-stamped, high-resolution accountability logging
- HazRAE is the only DOD Common Operating Environment/Joint Technical Architecture compliant solution
- Integrated interactive NFPA704 classification identifier
- Cargo and railcar placard identification
- Detonator identification
- User-programmable PPE preplans



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[www.raesystems.com](http://www.raesystems.com)



**APPROVED**  
Under the US Department of  
Homeland Security's SAFETY Act



## Specifications\*

Data Source	Number of materials and trade names	Where used
EPA, EU Commission on Hazardous Substances	96,000+	LEL, UEL, physical attributes, trade names
National Oceanic and Atmospheric Administration (No AA)	70,723	Reactive materials, physical attributes, trade names
No AA, EPA, CDC, USAMRIID	6,613	Reactivity, flammability, toxicity, specific hazards
Chemical Abstract Service	5,726	CAS numbers
Do T ERG-2004	3,408	Response SOP guides, isolation distances
NIH	5,432	Health, toxicological and ELSP information
USCG CHRIS	1,102	Various material attributes/water reactivity
EPA, o ASG, Nlo SH	1,101	IDLH values
Do E, CDC	2,519	TEEL, ERPGs
NFPA, RIDS	949	Fire rating classifications. <b>Note:</b> Where NFPA ratings between data sources differ, the most conservative value (from a safety perspective) is used.
Nlo SH Pocket Guide	677	IDLH values, physical attributes, respirator recommendations
Argonne National Labs	633	Isolation Distances, Protective Action Zones
Nlo SH, EPA, DuPont	31,000+	Protective clothing/breakthrough times
USAMRIID, WHO, CDC, HC	167	Biological warfare agents, biotoxins, and bioterror agents
FBI, DEA, ATF, EPA, United Nations	8,800+	Precursors for explosives, chemical warfare, cocaine, heroin, and methamphetamines

\*Specifications are subject to change

### HazRAE PDA Kit includes:

- HP iPAQ series PDA or equivalent
- Bluetooth® and 802.11 wireless enabled

HazRAE Software Version 3.0

- 64MB SD card with installation files

### HazRAE Software-only Kits include:

HazRAE Software Version 3.0

- 64MB SD card with installation file for Windows®-based PDAs OR
- CDROM with installation file for Windows®-based PCs

The image displays several screenshots from the HazRAE software interface. One screen shows a diamond-shaped hazard identification tool with a central red diamond and four colored quadrants (blue, yellow, red, white) containing numbers. Below it, text indicates 'Fire Hazard: <100°F (38°C)', 'Health Hazard: Extreme danger', and 'Reactivity: Unstable if heated'. Another screen shows a map with a yellow circle representing an 'Initial Isolation Zone' and a red dot for a 'Spill'. A third screen shows a list of chemical agents like ACETONE, BENZONITRILE, and CHLORINE, along with a pie chart titled 'Precursor outcomes' showing counts for Chem/WMD (8), Explosives (3), Heroin/cocaine (2), Meth. (2), and Unknown (1).

### Example screens from HazRAE:

- NFPA Identification
- Chemical Isolation Distance
- Placard Identification
- Mixture/Precursor Screen

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