

CCS Relational Chemical & Product Database (R-CPD) and Chemical Compliance Analytical System (C-CAS)

CCS specializes in environmental, health and safety compliance, chemical security, and hazardous material management services for academic institutions, federal agencies, and private industry. Our **Relational Chemical & Product Database (R-CPD)** is the most comprehensive database available. Our **Chemical Compliance Analytical System (C-CAS)** software is a unique, holistic capability that generates hundreds of compliance reports, diverse chemical usage analyses, and a wide array of safety and health assessments. Our customized turnkey implementation and maintenance services not only maximize benefits from our R-CPD and C-CAS, but alternatively provide integration with client pre-existing databases and other software options (e.g., HSMS, EMIS, HICS, EIM, etc.). CCS clients can achieve pollution prevention, hazardous materials procurement and waste minimization, EPCRA and RCRA compliance, and "environmentally preferable" product substitutions, all within our single, time-tested system. The net effects of CCS hazardous materials management services are more creative and cost effective solutions to complex problems, and "worry-free" compliance. This system has evolved from successful, customized applications for academic, industrial, and governmental clients.

The CCS **R-CPD** is a comprehensive hazardous materials repository consisting of an estimated 75,000,000 data elements for more than 210,000 chemicals and 350,000 products compiled from over 1,000 sources. This relational database is highly purified and has unique cross-functionality: a single source for materials management, environmental/safety/health, regulatory and security information. R-CPD is composed of the *Master Chemical Reference Data* and the *Master Product Reference Data*. R-CPD is used to quickly create the customized product and chemical databases used in our environmental management suite (C-CHEMS), our Homeland Security Suite (HoSS), and our Munitions Analytical Compliance Suite (MACS) of software modules.

Master Chemical Reference Data

Cross Reference Dictionary & Regulatory List of Lists The Chemical Cross Reference Dictionary contains 550,000 records of purified CAS numbers and their associated synonyms. This file facilitates accurate and complete materials management data searches and product substitution research. The Regulatory List of Lists file is comprised of over 650 international, federal, state and local regulated chemical lists and their associated data, as well as numerous CCS compiled lists (e.g., incompatible chemicals, hazard classes, etc.). Our modules compare a single chemical inventory file against these lists and generate a multitude of regulatory reports utilized by logistics, environmental/safety/health, and chemical security professionals, as well as first responders. Redundant data management across departments is eliminated, resulting in significant labor savings to the client and accelerated systems implementation.

Chemical Ratings The CCS chemical rating system utilizes a time-tested SOP and automates "green," or "environmentally preferable," chemical, process, product and munition analyses. This numeric, complete hazard rating system provides a basis for quantitatively defining acute and chronic health, air/water/soil environmental impacts, and fire, corrosivity, radioactivity, reactivity/explosivity special hazards associated with approximately 210,000 chemicals. These ratings form the basis of our "green," security, chemical and reactive analytical capabilities.

Alternative Chemicals CCS has identified over 40 primary categories of chemicals that include lists of alternative chemicals, their "green" ratings, regulatory impacts (upon 94 priority regulatory lists), and appropriate physical/chemical parameters so the user can assess equivalent functionality.

Chemical Compound Dictionary Several federal regulations (e.g., TRI, HAPs) require that compliance reports include chemical compounds (i.e., chromates). This database represents the only known resource for identifying which specific chemical compounds fall within each specific regulatory category. This dictionary correlates chemical names, synonyms, and CAS numbers for over 4,000 chemicals within nearly 60 different chemical compound categories.

Master Product Reference Data

MSDS Images & Indexes This file contains images with extensive analytical indexes for over 75,000 MSDSs and access to an additional 300,000 MSDSs. Our MSDS images represent over 90,000 products. The MSDS Index corrects the 15-30% errors typically found in MSDSs. A centralized MSDS image file with indexes fulfills all OSHA compliance access requirements. This file not only represents a *large* potential labor maintenance savings for the client, but also assures that the MSDS file correlates with the inventory, and that MSDSs remain current.

Product Item Index

Our product description file is the single largest table in our entire database, currently comprising precisely 50% of the total. The 6,900,000 unique identifiers (from NSN to Product Name, and beyond) provide the means for accurately identifying and evaluating the chemical product items represented in this table. This file enables CCS to easily correlate product MSDS and container names, unlike some other resources that utilize only the MSDS name. Relational linkages to the MSDS Images & Index, Product Component, and Manufacturer files provide a multi-dimensional analytical capability.

Product Components CCS has compiled over 3,000,000 specific descriptors for the 300,000 product components in this file, and has utilized our purified Cross Reference Dictionary to correct the 20-25% errors in manufacturer MSDS component information, thereby providing a highly purified resource. The purified CAS numbers in this file are the initial linkage between our massive *Master Product Reference Data* and our highly specific *Master Chemical Reference Data*.

Manufacturer File CCS has compiled the largest, purified chemical product manufacturers table currently available. Over 265,000 reference details have been accumulated for nearly 9,000 different manufacturers. We know what address retrieves the MSDS, in contrast to the address for the product manufacturing site. We have compiled name changes from corporate buy-outs, through the generations, or from mergers. We even have Cage Numbers for our government clients. This database is invaluable for cost effectively identifying the source for a current MSDS, for a discontinued product MSDS, or for kit parts MSDSs.

C-CAS

Our unique software modules were developed to effectively track material movement and simultaneously maximize analyses from information in the R-CPD. The concept is straightforward: maintain real-time inventories and query this information against an intelligent data source. C-CAS is a 32-bit Windows application using state-of-the-art Client/Server architecture with 32-bit clients and ODBC SQL server support. It has open deployment with two-way data replication. C-CAS contains a secure auditing subsystem, layer inventory processing, bar code scanning and document imaging support. It offers an open reporting interface which allows easy upgrades for evolving compliance report requirements.

Centralized Data Repositories

C-CAS contains a very creative communications module that provides a two-way information deployment capability. This gateway allows for the sharing of key information. First, this module enables the site to communicate data upward: either new data directed to the centralized data maintenance center for verification and/or elaboration, or report tabulations directed upward through the organizational hierarchy for more comprehensive compilations. Second, this module enables higher centers to communicate (often standardized) data downward: either from the centralized data maintenance center to the organization, or analytical results downward through the organizational hierarchy. Leveraging information and technology eliminates redundant database construction, saves significant dollars, and is critical to the success of implementing hazardous materials management systems across broad organizations. Similarly, this communication module allows parent organizations to "roll-up" information and analyze positive and/or negative hazardous material usage trends within their subordinate sites.

Analytical Reports

An accurate, real-time inventory, queried against our intelligent database, can generate over 400 chemical usage, site distribution, compliance and/or safety/health reports. The report generation capabilities of C-CAS support procurement, regulatory compliance, environmental, safety and health professionals simultaneously. Reports can reflect data concerning entire organizations, or can be filtered down to an individual building, a specific department, or a single room. The customized inventory and chemical/product reference databases enable C-CAS to perform four types of analyses. First, *materials management analyses* facilitate minimized procurement and waste. Second, *regulatory impact analyses* provide location- and product-specific awareness for hundreds of local, state and federal compliance issues. Third, *environmental, health, and safety analyses* provide a quantitative basis to identify pollution prevention opportunities and minimize worker and environmental risks. And finally, automated *environmentally preferable product analyses* establish a mechanism to pre-screen thousands of products, and thereby eliminate risks and pollutants before they are acquired. No other available system offers this breadth of analytical and control capability.

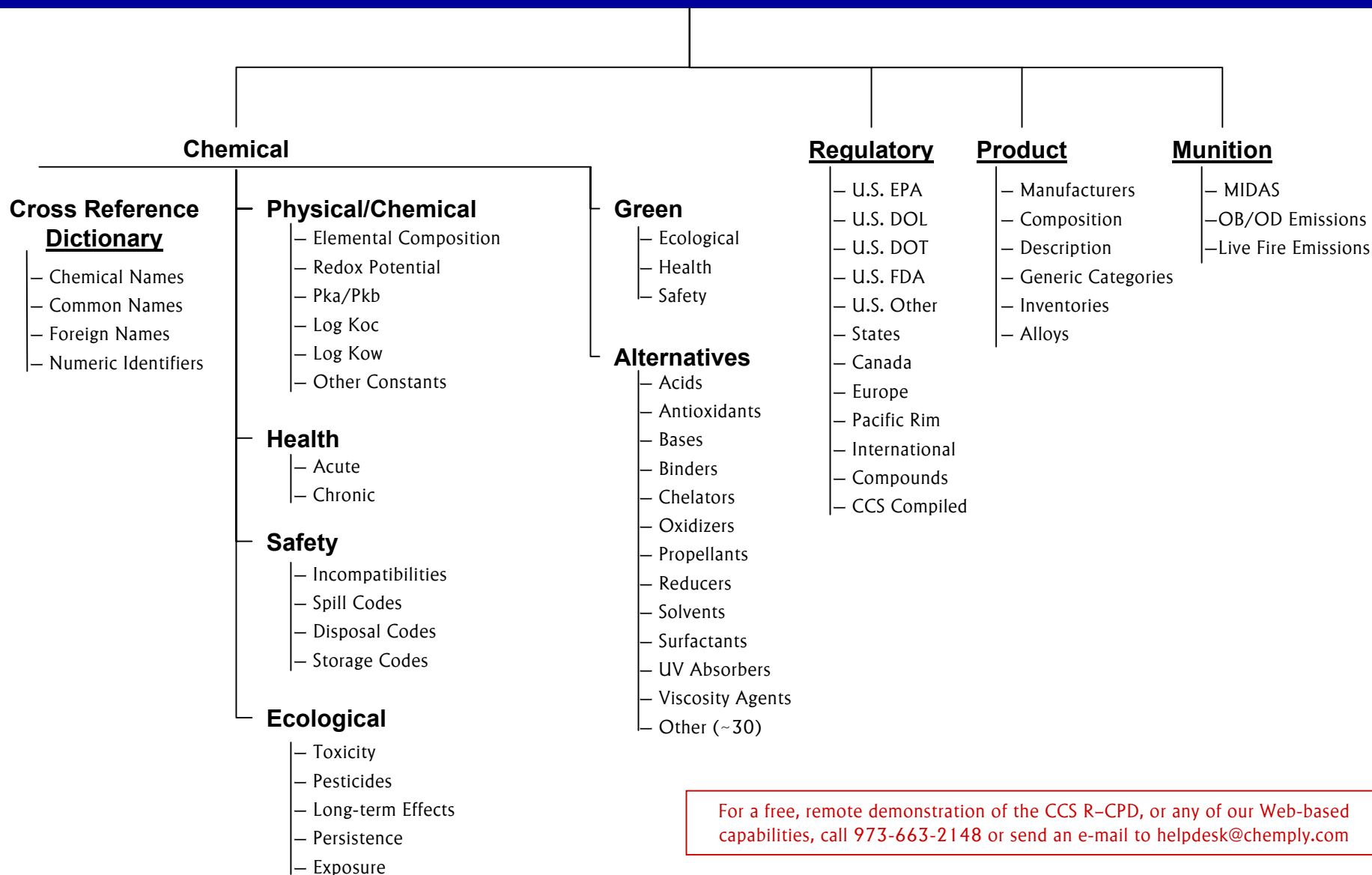
For a free, remote demonstration of the CCS R-CPD
or any of our Web-based capabilities,
call 973-663-2148 or send an e-mail to
helpdesk@chemply.com

CCS

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