

Corresponding to the current edition in content, the electronic version of the *CRC Handbook of Chemistry and Physics* enables quick and easy access to everything the handbook has to offer.

Desktop access to this product is available to PNNL and staff on HLAN only; also available at user stations at HTL

Access the *CRC Handbook of Chemistry and Physics* at: <http://www.hbcnetbase.com/>

Note: This product uses pop-up windows to display data. You will need to temporarily disable any pop-up blocker tools you are using with your browser.

Browsing the Handbook

To navigate to a specific section, use the **Table of Contents** in the frame on the left of the screen.

- Click the  next to the section titles to reveal additional subsections, and then click the link to view the data.

Note: Clickable icons are available to view the data in interactive tables,  or within the text of the *Handbook*.  Java must be enabled by your browser to view the tables.

Searching the Handbook

You may search the *Handbook of Chemistry and Physics* using a **Text** or a **Structure/Property** search.

Text Search

A Text search will locate specific words or phrases within the Handbook. Special characters and subscripts will not be retrieved in a text search.

- Type your search term(s) in the **Text Search** box located in the upper right of the screen and then click **Go**.

Structure/Property Search

You may perform a search by drawing a Chemical Structure, or by completing the Chemical Properties section. To perform a more complex search, you may combine a Chemical Structure with the parameters set in the Chemical Properties section. Chemical properties include: **molecular formula, molecular weight, boiling point, flash point, spectral wavelength**, etc.

- Click the **Structure/Property Search** link located in the upper right of the screen.
 - For a Chemical Structure search: Click in the **Draw Structure** box and use the tools in the Structure **Sketch** window to create a structure. Once a structure has been created, click **Add Structure** to load the query into the search form.
 - Select either **Substructure** or **Exact Match**, and then click **Search**.
 - For a Chemical Properties Search: Fill in information into the default fields (Name of substance, Formula, CAS Registry No., Molecular weight, etc.)
 - If additional parameters are needed, click the **Add Another Property** link. Select the desired field(s) from the **Available Fields** box and then click **Apply Changes**.
 - Complete the search boxes with the desired data. **Example:** In the **Molecular Weight** field, select the **Range** operator from the drop-down menu and type the data range of **57** in the first box and **71** in the second box.

Search Tips

- Compounds entered in the **Molecular Formula** Field may need to be entered in Hill Order and again as a separate search as the common formula. This field is case sensitive.
Hill Order: Carbons must be arranged first, hydrogens second (if present), and all other elements after that in Alphabetical order). **Example:** C₈H₁₈, C₂Ag₂N₈, C₉H₈Cl₄N₈O. If no carbons are present, then elements should be placed in alphabetical order, indicating the number of each element present (or no number if the element is only present once). **Example:** CeO₂, Cl₆Sb.
- The **Common Formula** allows for molecular formulas in the customary order. **Example:** When searching for sodium chloride, use **CINa**, following Hill Order. In a second search, enter the formula as **NaCl**.
- Be aware of British spellings of words. For example: aluminium, etc.

Navigating the Interactive Tables:

Within each table there are several manipulation tools available. These icons are located at the top of the table:

Filtering : Use this tool to search for an item within a table.

Exporting data : Once you have located data within a table you are able to export the data (up to 25 rows) and download it to your machine as an MS Excel file. Click the **Export** icon. A new window will load with the option to download the file to a location of your own choosing.

Restoring the Default Ordering : This will return the table to the default settings.

You can also sort by the column headings by clicking on them.

Printing/Downloading

Tabular Format

1. To **print**, click the printer icon within the spreadsheet window. This will format the table into a printable layout within a new window (formatting may take several minutes). Click the printer icon in the new window to print the data.
2. To **save**, click the printer icon. When the printable format window appears, select the **Save As...** option from the **File** menu without canceling the print options window. The default will save the file as an html page, but you may also save as a text file.

Note: If using Internet Explorer as your browser, an easy way to save a table is to select the printer icon to format the data into a printable layout. Under the **Edit** menu, choose **Select All**, and then **Copy**. Open Microsoft Excel and copy the data into a spreadsheet.

Text Format

Text data will appear in a separate window in pdf format.

1. To **print**, click the printer icon within the pdf window.
2. To **save**, click the disc icon and follow the dialog box instructions.

Additional help for the *CRC Handbook of Chemistry and Physics* is located at <http://www.hbcpNetbase.com/help/default.asp>.

CHEMnetBASE provides access to information on chemistry, medicine, materials science, and physics from a variety of major reference sources. The Hanford Technical Library's subscription includes:

- The *Combined Chemical Dictionary (Dictionary of Commonly Cited Compounds, Dictionary of Drugs, Dictionary of Inorganic and Organometallic Compounds, Dictionary of Natural Products, and Dictionary of Organic Compounds)* https://library.pnl.gov/ebooks.asp?alpha=D&resource_type_id
- The *CRC Handbook of Chemistry and Physics* https://library.pnl.gov/ebooks.asp?alpha=H&resource_type_id
- *Polymers: A Property Database* https://library.pnl.gov/databases.asp?alpha=P&resource_type_id
- *Properties of Organic Compounds* https://library.pnl.gov/databases.asp?alpha=P&resource_type_id