



- new!** **PTC Product Focus:** [A\) Expert Framework Extension \(EFX\)](#)  
[B\) InterComm : Accelerating Interactive Electronic Design Collaboration](#)
- new!** **Tips of the Week:** [A1\) How To Associate Wildfire 2.0 to Adobe](#)  
[A2\) Angled Holes : From 4 Pattern Features to One](#)  
[B\) Understanding Boolean Keyword Search in Windchill](#)
- new!** **Announcements:** [Most Recent Announcements](#)
- new!** **Upcoming Events & Training Schedule:** [Events & Training Schedule](#)

## PTC Product Focus

### Expert Framework Extension (EFX)

[Click Here To View](#)

[Back To Top](#)

## PTC Product Focus

### InterComm™

Accelerating Interactive Electronic Design Collaboration

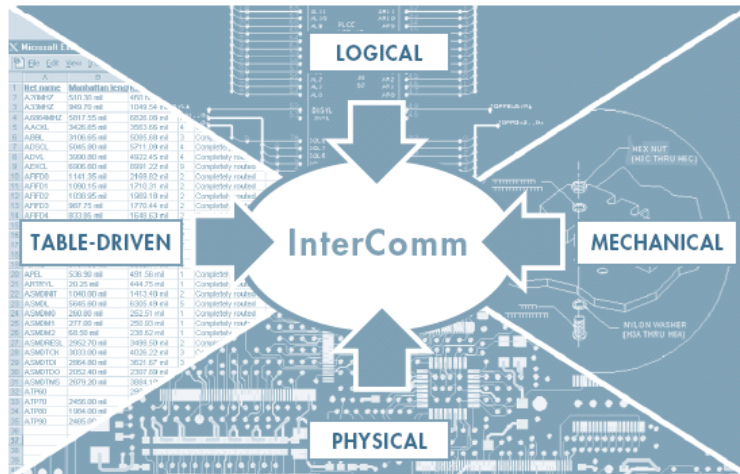
InterComm is a production-proven suite of electronic design collaboration solutions to enable enterprise-wide visualization, design verification, and collaboration of electronic design content. InterComm provide simple access to complex CAE/ECAD design data created in leading electronic design automation (EDA) tools. By improving collaboration between departments, customers can eliminate a design spin through higher quality prototypes.

The InterComm ECAD browser is a powerful, yet easy-to-use solution for enterprise-wide sharing, reviewing, annotating, and verification of electronic design intent. InterComm gives engineers, manufacturers, test technicians and their suppliers controlled access to design data created in leading EDA tools, including those provided by Cadence Design Systems, Mentor Graphics, Zuken, and other EDA vendors. Much more than just a viewer, InterComm enables non-EDA users to interactively de-bug and verify the design intent of schematic and PCB designs directly from their desktops, without requiring an expensive and hard-to-use native EDA license.

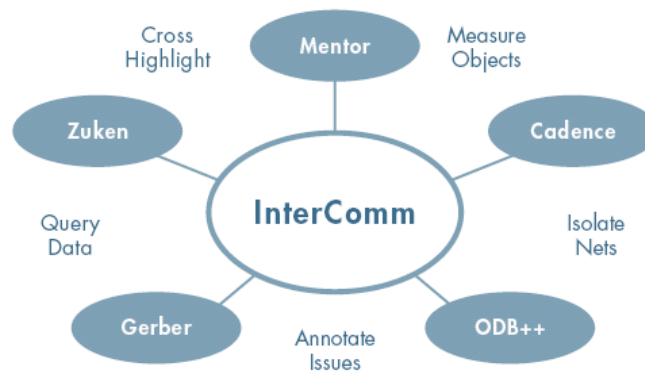
By providing both visual and programmatic access to fully intelligent electronic design data, the design intent can be more quickly verified between engineering, design, fabrication, test, and

assembly departments. Users can easily interact with fully intelligent EDA design data, including complete data browsing, querying, verifying, markup, and communication of design issues and ideas on the component library, logical schematic, physical printed circuit board (PCB), and bill-of-materials.

InterComm, is successfully deployed at hundreds of small, medium, and Fortune 500 electronics companies around the world as the preferred method for design verification and troubleshooting.



Bringing together multiple domains of product design.



Easily collaborate on design data from multiple EDA vendors.

## InterComm Expert 5.1

InterComm Expert enables users to easily interact with electronic design information directly from their desktops, without requiring the native EDA tool. Users are able to:

- Browse the information contained in the schematic CAE or PCB CAD databases for library, schematic, PCB, and bill-of-materials data
- Query intelligent ECAD design data and verify design intent
- Follow nets across the schematic by pin function, and trace receivers back to drivers to identify the source of a bad signal

- Communicate changes, ideas, or redline data back to the EDA user electronically

### **InterComm Expert Product Capabilities**

- Query, measure and highlight detailed placement, net and component data
- Cross-highlight between the schematic, layout and bill-of-materials
- Redline mark-up in any language worldwide and communicate with internal and OEM engineers
- Create custom applications using the API to improve the internal process

### **Benefits Experienced by InterComm Customers**

- Increased design team communication time by 55%
- Eliminated one design spin per board—savings can be weeks or months
- Reduced overall design cycle time by 30 - 35%
- Reduced tooling costs by 25%
- Improved design and manufacturing team capacity by 22%
- Improved internal and supply chain communication with dispersed engineering, test, and manufacturing teams
- Realized a 65% productivity gain in board test alone
- Improved design integrity (right the first time) with fewer design spins
- Discovered test and repair anomalies in-process rather than later in the process
- Reduced design review time from days to hours

### **InterComm Customers Include**

#### **AUTOMOTIVE**

- Visteon
- Motorola ACES

#### **TELECOM**

- Lucent
- Nokia
- Ericsson

#### **COMPUTER**

- Dell
- Intel
- EMC
- Storage Computers
- Unisys
- HP
- IBM

#### **CONSUMER ELECTRONICS**

- Bose
- Thomson Multimedia
- Xerox

#### **CELL PHONE MAKERS**

- Siemens
- Ericsson
- Panasonic
- Samsung

#### **AEROSPACE/DEFENSE**

- Lockheed Martin
- Loral Space
- Harris Corporation
- Rockwell
- BAE Systems
- Raytheon
- General Dynamics
- Harris Semiconductor

#### **NETWORK ELECTRONICS**

- Cisco Systems
- Nortel Networks
- Ellacoya Networks
- Ciena
- Sonus Networks

## Partnerships

### InterComm EDA Partnerships



### InterComm PLM Partnerships



## InterComm Expert 5.1 Enhancements

- Overlay manipulation
- Gerber D codes list and cursor tips
- Access options dialog box without loading the design
- Right click menu
- UI for custom API commands
- Classes
- Snapshot command (bitmap cut/paste buffer — e-mail)
- Expanded isolate
- Engineering build notification
- File source tracing
- Default options/colors and save/restore
- Set sub-layer colors by layer
- Improved logical links and connectivity
- Stop redraw command
- Highlight print in color
- Dynamic pan by cursor

## API Toolkit — Data Mining Without Use of the Native EDA Tools

InterComm Expert's API Toolkit allows our customers to data-mine both the parametric and graphical design data of the fully intelligent database captured in InterComm without the use of the native EDA tools. Our customers use the API toolkit to customize reports to support the verification and documentation of ECAD designs. Example reports include:

- Compare design BOM with an external BOM report
- Generate custom Net Length report
- Generate custom Netlist report
- Generate testability report
- Find components by Ref Des

- Create user-definable design rule checks
- Add user-defined property
- Communicate a design summary
- Highlight all #1 pins, components, and nets

### **API Toolkit Capabilities**

- Included with InterComm Expert
- Unrestricted data mining for all design objects, including their attributes and properties
- Standardized API calls regardless of the native EDA tools
- Accessible via all major programming languages such as C, C++, Java, Visual Basic, etc.
- Can be used from within InterComm – custom interactive commands and reports, as well as programming links to other processes
- Can be used from outside of InterComm with graphics as a slave process
- Can be used from outside of InterComm without graphics for pure data mining
- Fully documented with an interactive debugging tool

### **API Toolkit Customer Benefits**

- Extracts data from the EDAfiles instead of pre-processing data from the native EDA tools
- Optimizes programming resources in custom-developed data mining
- Minimizes enterprise-wide dependency on the specific EDA toolset
- Minimizes use of EDA tool licenses outside of the design departments
- Improves user efficiency by adapting InterComm's UI to specific tasks

### **EDAfile — Normalized Representation of the EDA Data**

EDAfile is a powerful and enabling alternative to a multiplicity of incompatible EDA file formats and data representations. An EDAfile is a single binary file that replaces directory and file complexity of the native EDA data containers, enabling enterprise-wide distribution outside of the EDA tool environment.

### **EDAfile Capabilities**

- Significantly smaller (5x-10x) than the original EDA data container
- Very fast load into InterComm
- Password protection against unauthorized use
- Date expiration for planned obsolescence
- Source and owner information for traceability
- Interactive Disclaimer dialog box for enforcement and clarification of the intended use
- EDAfile Customer Benefits
- Normalized data distribution format for all EDA databases
- Minimized storage requirements during collaboration
- Full protection against unauthorized use of data

[Back To Top](#)

## Tips of the Week

### How to Associate Wildfire 2.0 to Adobe

### Angled Holes : From 4 Pattern Features to One

[Click Here To View](#)

[Back To Top](#)

## Tips of the Week

### Understanding Boolean Keyword Search in Windchill

Here is some helpful information about using Windchill's keyword search. This information helps explain how information is indexed (or parsed) into keywords and also shows examples of keyword searching capabilities that can help save time in finding information.

#### Information Indexing

When information is stored in Windchill, it is indexed word by word, and then becomes searchable using the keyword search mechanism. The keywords are then organized and indexed, and are used as the comparison target when you exercise a keyword search.

The process of indexing looks at all the words, including attributes, names, descriptions, text, and the document contents, and identifies each word that is separated by spaces or punctuation as a keyword. So remember, all the information that you see on a Document or Part Details page is indexed word by word.

The most important point to remember is that the keyword search is performed word by word.

#### Keyword Searching 7 Wildcards

Normally, when you do not know the specific target item you are looking for, keyword search can save you time in finding information. Keywords help you in finding occurrences of information. Keyword searching includes the use of wildcards such as:

In addition Boolean operators (AND, OR, NOT) are also supported, creating a powerful searching tool, especially useful in locating information with which you are not familiar.

Keyword searching is case insensitive.

Keep in mind that keyword searching is always combined with the other search criteria fields, so the results of a keyword search can be further screened by type of object, dates, owner, or any other fields in the lower section of the Search page.

## Wildcard Character in Windchill Keyword Search

Wildcard	Description	Example
@	Matches exactly one alphabetic character.	c@re
#	Matches exactly one numeric character.	#600
\	Indicates that the next character should be taken literally (the next character is not an operator).	service\@mycompany.com
*	Matches any character(s).	spec*
?	Matches exactly one character.	g?dget
[ ]	Matches only one character within the brackets. You can include a hyphen to indicate a range of numbers or letters.	199[1-6]
[ ^ ]	Matches any character except the character(s) specified. You can include a hyphen to indicate a range of numbers or letters.	199[^1-3]

The following examples show how many of these Keyword capabilities can be utilized.

# Find everything about benzene in our product information.

Type benzene.

Windchill Visual Information Collection | Learn | Help | Publications | E-mail Page | Hot Links [Copy Page](#)

Home Product Project Change Library Organization Search:  Go

Overview Assignments Updates Checked-Out Work Workspaces Meetings Notebook Subscriptions Reports Utilities

Advanced Search [References](#) Saved Searches:  Go Delete ?

Use a \* as a [wildcard](#) to return more search results

Keyword:

Name:  Number:

Results Per Page:

Search In:   Apply selection only to contexts I'm a member of.

Search For: All [Change...](#)

Modified:    From:  MM/DD/YYYY To:  MM/DD/YYYY

Created:    From:  MM/DD/YYYY To:  MM/DD/YYYY

Modified By:  [Find...](#) [Clear](#) Owned By:  [Find...](#) [Clear](#)

Created By:  [Find...](#) [Clear](#)

[Search](#) [Save](#) [Clear](#)

## Explanation:

Windchill looks for all occurrences of benzene as a separate keyword. This means the word benzene separated by spaces or punctuation.

Keywords include titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

This is a very broad search and if you are searching for a common term, it will probably return hundreds if not thousands of objects.



# Find all information in our product information that may be related to benzene.

Type \*benz\*.

The screenshot shows the Windchill Advanced Search page. At the top, there are navigation links like Home, Product, Project, Change, etc. The main search area has a 'Keyword' field with the text '\*benz\*' entered. Below it are fields for 'Name' and 'Number'. There are also options for 'Results Per Page' (set to 15), 'Search In' (set to All Contexts), and 'Search For' (set to All). There are also date range filters for 'Modified' and 'Created' with 'From' and 'To' fields. At the bottom, there are 'Find...', 'Clear', 'Search', 'Save', and 'Clear' buttons.

## Explanation:

Windchill looks for all words that include the letters 'benz', and that may have additional letters in the word before or after 'benz'. This would match words like benzene, methylbenzene, benzetone, and methylbenzetone. The \* is a wildcard and represents zero or more characters of any kind.

Keywords include titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

This is an extremely broad search and if you are searching for a common term, it will probably return hundreds if not thousands of objects.

# Find every place we reference benzene or bunzene in our product information.

Type b@zene as a keyword.

Windchill Visualization Center | Learn | Help | Publications | E-mail Page | Hot Links | Copy Page

Home | Product | Project | Change | Activity | Organization | Search: [ ] Go

Overview | Assignments | Updates | Checked-Out Work | Workspaces | Meetings | Notebook | Subscriptions | Reports | Utilities

Advanced Search | Preferences | Saved Searches: [ -- Select a Search -- ] Go | Delete | ?

Use a \* as a wildcard to return more search results

Keyword: b@zene

Name: [ ] Number: [ ]

Results Per Page: 15

Search In: [ All Contexts ]  Apply selection only to contexts I'm a member of.

Search For: All [ Change... ]

Modified:  -- Select Range --  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Created:  -- Select Range --  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Modified By: [ ] Find... Clear Owned By: [ ] Find... Clear

Created By: [ ] Find... Clear

[ Search ] [ Save ] [ Clear ]

## Explanation:

Windchill interprets the @ as a wildcard that represents any single letter. So this keyword search would retrieve benzene and bunzene, but it would also retrieve banzene and bonzene, but not blanzene (2 letters, rather than 1). Again, these matching keywords are separated by spaces or punctuation.

Keywords include titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

# Find every place we reference benzene1 thru benzene9 in our product information,

Type benzene# as a keyword.

Windchill Visualization Collection | Help | Publications | E-mail Page | Hot Links | Copy Page

Home | Product | Project | Change | Library | Organization | Search: [ ] Go

Overview | Assignments | Updates | Checked | Work | Workspaces | Meetings | Notebook | Subscriptions | Reports | Utilities

Advanced Search | Preferences | Saved Searches: -- Select a Search -- | Go | Delete | ?

Use a \* as a **wildcard** to return more search results

Keyword: benzene#

Name: [ ] Number: [ ]

Results Per Page: 15

Search In: All Contexts |  Apply selection only to contexts I'm a member of.

Search For: All | Change...

Modified:  -- Select Range -- |  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Created:  -- Select Range -- |  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Modified By: [ ] Find... Clear | Owned By: [ ] Find... Clear

Created By: [ ] Find... Clear

Search Save Clear

## Explanation:

Windchill looks for all occurrences of 'benzene' followed by any single number, the # represents any single number. This search would find benzene1, benzene2, benzene3, benzene4, benzene5, benzene6, benzene7, benzene8, benzene9, benzene0, as separate keyword.

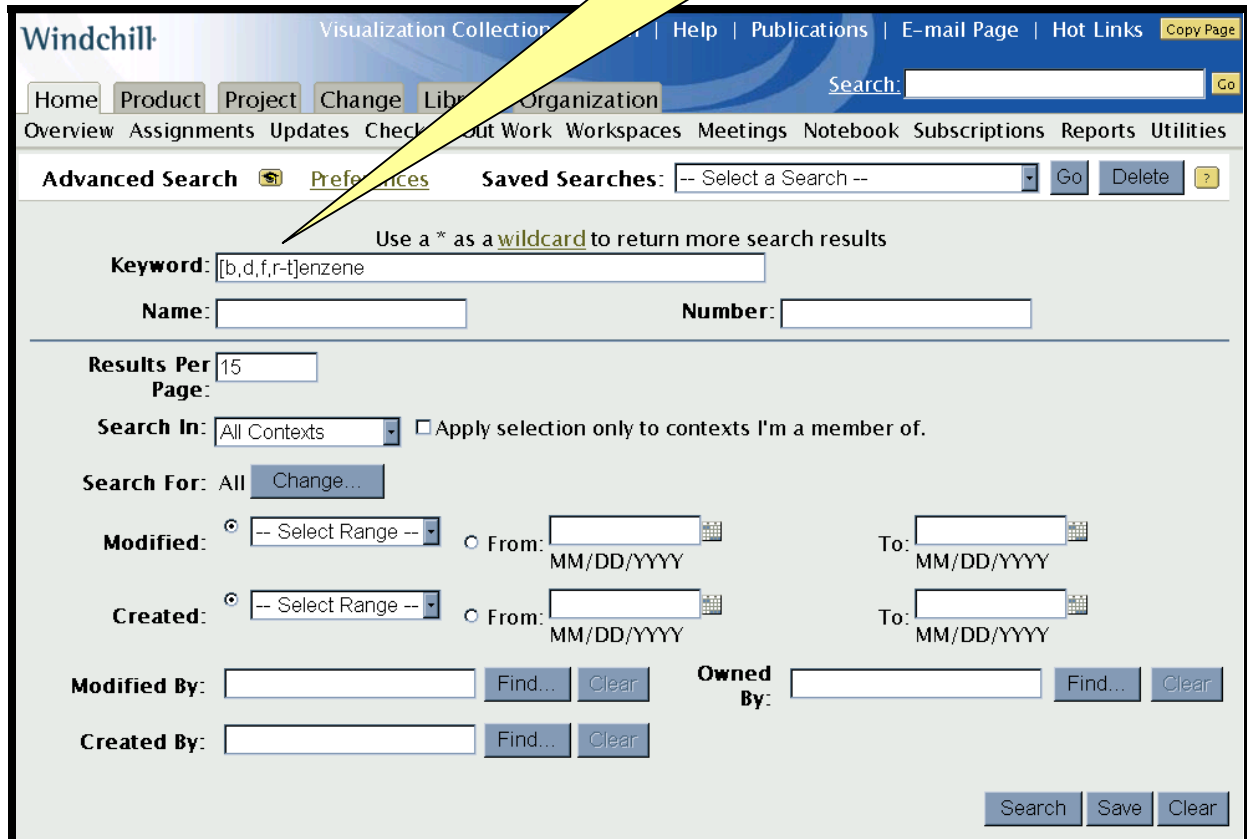
This search would not find benzene10, as this is 2 numeric digits. You could search for \*benzene#\* to find all occurrences of benzene followed by a number in the same word.

Keywords include titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

# Find every place we reference benzene, denzene, fenzene, renzene, senzene, tenzene

Type [b,d,f,r-t]benzene.



The screenshot shows the Windchill Advanced Search interface. At the top, there are navigation tabs for Home, Product, Project, Change, Library, and Organization. Below these are various search filters and options. The main search area includes a 'Keyword' field containing '[b,d,f,r-t]benzene', a 'Name' field, and a 'Number' field. There are also options for 'Results Per Page' (set to 15), 'Search In' (set to All Contexts), and 'Search For' (set to All). The 'Modified' and 'Created' sections have radio buttons for 'From' and 'To' with date pickers. At the bottom, there are 'Find...' and 'Clear' buttons for 'Modified By', 'Created By', 'Owned By', and 'By'. A yellow callout bubble points to the 'Keyword' field with the text 'Type [b,d,f,r-t]benzene.'

Explanation:

Windchill looks inside for any words that have the letters inside the square brackets (values are separated by commas) followed by 'enzyme'. Note that you may specify a range of characters by using the – as a separator.

Keywords include titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

# Find every place we reference benzene or chlorine

Type benzene chlorine.

The screenshot shows the Windchill search interface. At the top, there are navigation links: Home, Product, Project, Change, Library, and Organization. Below these are more links: Overview, Assignments, Updates, Checkouts, Work, Workspaces, Meetings, Notebook, Subscriptions, Reports, and Utilities. The main search area is titled 'Advanced Search' and includes a 'Saved Searches' dropdown menu. The 'Keyword' field contains the text 'benzene chlorine'. Below the keyword field are fields for 'Name' and 'Number'. The 'Results Per Page' is set to 15. The 'Search In' dropdown is set to 'All Contexts'. The 'Search For' dropdown is set to 'All'. The 'Modified' and 'Created' sections each have a radio button for 'From' and 'To' with date pickers. The 'Modified By' and 'Created By' sections each have a 'Find...' and 'Clear' button. At the bottom right, there are 'Search', 'Save', and 'Clear' buttons.

## Explanation:

Windchill looks for the keyword benzene and keeps that list. It then looks for the keyword chlorine and keeps that list. The 2 lists are then added together into a summary list, duplicate results are eliminated, yielding the final net results.

When Windchill sees multiple words in the Keyword field, it assumes a Boolean OR operator. So in this case, the search 'benzene or chlorine' would produce identical results. You can add multiple

Keywords include includes titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

# Find every place we reference benzene and chlorine in the same context

Type benzene AND chlorine.

The screenshot shows the Windchill Advanced Search page. At the top, there are navigation tabs: Home, Product, Project, Change, Library, and Organization. Below these are links for Overview, Assignments, Updates, Checked, Work, Workspaces, Meetings, Notebook, Subscriptions, Reports, and Utilities. The main search area is titled 'Advanced Search' and includes a 'Saved Searches' dropdown menu. The 'Keyword' field is highlighted with a yellow callout bubble containing the text 'Type benzene AND chlorine.' and contains the text 'benzene AND chlorine'. Below the keyword field are fields for 'Name' and 'Number'. The 'Results Per Page' is set to 15. The 'Search In' dropdown is set to 'All Contexts'. The 'Search For' dropdown is set to 'All'. The 'Modified' and 'Created' sections have radio buttons for 'From' and 'To' date ranges. The 'Modified By' and 'Created By' sections have 'Find...' and 'Clear' buttons. At the bottom right, there are 'Search', 'Save', and 'Clear' buttons.

## Explanation:

Windchill looks for the keyword benzene and keeps that list. It then looks for the keyword chlorine and keeps that list. The 2 lists are then compared and only entries that are in both lists are entered into the summary list, duplicate results are eliminated, yielding the final net results.

When Windchill sees AND in the Keyword field, it performs the above comparison. You can add multiple AND keywords to look for items with multiple keywords.

Keywords include includes titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

# Find every place we reference benzene and chlorine in the same context, and also anyplace we reference iodine.

Type ((benzene AND chlorine) OR iodine).

Windchill Visualization Collection | Publications | E-mail Page | Hot Links | Copy Page

Home | Product | Project | Change | Library | Or | Search: [ ] Go

Overview | Assignments | Updates | Checked-Out | Workspaces | Meetings | Notebook | Subscriptions | Reports | Utilities

Advanced Search | Preferences | Saved Searches: -- Select a Search -- | Go | Delete | ?

Use a \* as a wildcard to return more search results

Keyword: ((benzene AND chlorine) OR iodine)

Name: [ ] Number: [ ]

Results Per Page: 15

Search In: All Contexts |  Apply selection only to contexts I'm a member of.

Search For: All | Change...

Modified:  -- Select Range -- |  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Created:  -- Select Range -- |  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Modified By: [ ] Find... Clear | Owned By: [ ] Find... Clear

Created By: [ ] Find... Clear

Search Save Clear

## Explanation:

Here Windchill creates results lists for benzene AND chlorine (as explained above), iodine, and then performs the OR combination of the lists, creating the results set. It is always a good idea to use parentheses to explicitly group your Boolean operations into the order of execution to perform the correct search.

Keywords include includes titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

# Find every place we reference benzene, but do not include anything with iodine.

Type benzene AND NOT iodine.

Windchill Visualization Collection Help | Publications | E-mail Page | Hot Links Copy Page

Home Product Project Change Library Visualization Search: [ ] Go

Overview Assignments Updates Checked-Out Workspaces Meetings Notebook Subscriptions Reports Utilities

Advanced Search Preferences Saved Searches: -- Select a Search -- Go Delete ?

Use a \* as a wildcard to return more search results

Keyword: benzene AND NOT iodine

Name: [ ] Number: [ ]

Results Per Page: 15

Search In: All Contexts  Apply selection only to contexts I'm a member of.

Search For: All Change...

Modified:  -- Select Range --  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Created:  -- Select Range --  From: [ ] MM/DD/YYYY To: [ ] MM/DD/YYYY

Modified By: [ ] Find... Clear Owned By: [ ] Find... Clear

Created By: [ ] Find... Clear

Search Save Clear

## Explanation:

Here Windchill creates results lists for benzene (as explained above), but then further filters the results to make sure that there is no iodine keyword in the results. The use of NOT is valuable in filtering out unwanted information, but it is rarely used as a primary keyword search. The reason for this is simple, it returns too many items, and rarely makes sense as single keyword criteria. In fact, many Internet search engines do not support the NOT operator just because of the potential of avalanche results.

Be very careful when using the NOT operator, and never use it alone.

Keywords include includes titles, names, descriptions, comments, attribute values, document/spreadsheet/presentation contents.

This search is conducted across all types of information objects, including Parts, Documents, CAD Documents, Change Request/Order/Activity, etc.

[Back To Top](#)



## Announcements

### Educational Resource Library

Learn things you always wanted to do - but didn't know you could.

This one stop educational resource library will help you learn more about PTC Solutions and provide you with technical materials developed by the product experts to help you become more productive.

Get tutorials, how-to videos and expert advice for:

- [Pro/ENGINEER](#)
  - [Conceptual and Industrial Design](#)
  - [Detailed Design](#)
  - [Simulation/Analysis](#)
  - [Production](#)
  - [Design Collaboration](#)
- [Windchill PDMLink](#)
- [Windchill ProjectLink](#)
- [Pro/INTRALINK](#)
- [PTC Online Tools](#)

Check out the [Educational Resource Library](#) today.

### Live Instructor-Lead Virtual PTC Training Courses

PTC will be offering a series of Virtual Classrooms this quarter for you looking to save money (15% off ILT prices) and cut down on travel.

Virtual Classrooms provide interactive learning with a trained PTC instructor in convenient and manageable sessions that last approximately 4 hours over a series of days. It's easy to join a class right from your desk using a phone or voice-over IP technology.

Sessions are performed just like a traditional ILT (including interactive exercises where you and the instructor can work on lab exercises together) and feature some of our most popular ILT courses. These sessions cover the exact same material as the traditional ILT in-center courses. Also look for some of our most frequently requested mini-topics delivered in the same format that are only an hour - two hours in duration.

If you have any questions about these sessions or would like to see getting other courses, not on this list, on the schedule please feel free to contact me for more details. They are a great way to bring training to you without you having to worry about location or being out from work for long stretches.

You can register for these sessions just as you would for any normal ILT class either by:

1. calling order admin at <http://www.ptc.com/services/edserv/training/registra.htm> or
2. you can go to PTC University directly at <http://www.ptc.com/learning> and submit a registration request directly. All you have to do is search the catalog by typing in “virtual” in the search field and you will see a listing.

## PTC Tips & Techniques Newsletter Archives

Miss an issue! Can't find that awesome technique you read about? Fear not, you can click on the link below and go through our Customer PTC E-Newsletter archives.

[Click Here To Access](#)

It's better than finding the Covenant of the Ark!

## PTC Tips & Techniques Webcasts: Work Smarter. Not Harder.

Click below to see regularly scheduled Tips & Techniques technical Webcasts that are designed to provide you with the most popular time-saving tricks that Pro/ENGINEER users of all skill levels will find useful. Get more out of your maintenance dollars!

[Tips & Techniques: Work Smarter Not Harder!](#)

## Hands-On Workshops

Experience and receive the next generation of CAD - Pro/ENGINEER Wildfire. During these workshops you can try it yourself to experience this breakthrough in simple, powerful, and connected in CAD software.

[http://www.ptc.com/appserver/it/icm/cda/template\\_lib/events/online.jsp?im\\_dbkey=17625&im\\_language=en](http://www.ptc.com/appserver/it/icm/cda/template_lib/events/online.jsp?im_dbkey=17625&im_language=en)

## PTC Sponsored Events

Click below to see PTC sponsored events:

<http://www.ptc.com/company/news/events/index.htm>

Thinking About Pro/ENGINEER Wildfire? Check this out.



<http://www.ptc.com/go/engineering/index.htm>

## **E-PROFILES IS HERE!!**

We have been eagerly anticipating the debut of the new electronic version of Profiles Magazine and now it is here! This new web site will supplement the print edition of the magazine and will provide new useful features not feasible with paper media. e-Profiles will provide you with 24x7, worldwide access to key information previously available exclusively in the print version. "Tips & Tricks," a popular feature pioneered by Pro/USER, has also moved to the web and will be expanded as the site matures. Future plans include several foreign-language editions of Profiles for our many international readers. Currently, Profiles is printed in English and Japanese.

Please take a few minutes to check out this new web site. We don't think you will be disappointed.

<http://profilesmagazine.com/>

---

---

[Back To Top](#)

## Upcoming Events & Training Class Schedules

Upcoming, 2005                      Your local Pro/Engineer User Groups  
<http://www.ptcuser.org/rugs/>

June 5 - 8, 2005                      Orlando, FL  
PTC/USER International Conference  
<http://www.ptcuser.org/>

Please visit the [PTC Education Services](#) website for the latest training information including course descriptions, schedules, locations, and pricing.

- Attend a course at any PTC Center and receive a **free** copy of Pro/ENGINEER Wildfire Student Edition!

<http://www.ptc.com/services/edserv/index.htm>

### Live Instructor-Lead Virtual PTC Training Courses

PTC will be offering a series of Virtual Classrooms this quarter for you looking to save money (15% off ILT prices) and cut down on travel.

Virtual Classrooms provide interactive learning with a trained PTC instructor in convenient and manageable sessions that last approximately 4 hours over a series of days. It's easy to join a class right from your desk using a phone or voice-over IP technology.

Sessions are performed just like a traditional ILT (including interactive exercises where you and the instructor can work on lab exercises together) and feature some of our most popular ILT courses. These sessions cover the exact same material as the traditional ILT in-center courses. Also look for some of our most frequently requested mini-topics delivered in the same format that are only an hour - two hours in duration.

If you have any questions about these sessions or would like to see getting other courses, not on this list, on the schedule please feel free to contact me for more details. They are a great way to bring training to you without you having to worry about location or being out from work for long stretches.

You can register for these sessions just as you would for any normal ILT class either by:

1. calling order admin at <http://www.ptc.com/services/edserv/training/registra.htm> or
2. you can go to PTC University directly at <http://www.ptc.com/learning> and submit a registration request directly. All you have to do is search the catalog by typing in "virtual" in the search field and you will see a listing.

PTC

Note: This PTC E-Newsletter will continue to be used for the following:

- 1) Inform you on events related to PTC products (user groups, conferences, training schedules, etc.)
- 2) Educate you on solutions that are available at PTC
- 3) Tips & Techniques using PTC Products

Note: These messages are compiled in the local PTC office and will be distributed via e-mail.

[Back To Top](#)