# RTECS® (Registry of Toxic Effects of Chemical Substances)

## Subject Coverage
- Identification of Substances
- Toxicity Data
- Irritation Data
- Federal Standards & Regulations
- EPA, NIOSH, NTP, & OSHA Activities
- Mutation Data
- Tumorigenic Effects
- Reproductive Effects
- Toxicology reviews
- Other Multiple Dose Data

## File Type
- Directory, Substance, Property

## Features
- Thesaurus: None
- Alerts (SDIs): Not Available
- CAS Registry Number® Identifiers: Yes
- Page Images: No
- STN® AnaVis™: No
- Keep & Share: Yes
- SLART: Yes
- STN Easy®: Yes
- Learning Database: No
- Structures: Yes

## Record Content
- Substance information
- Numeric toxicity data
- Standards and regulations

## File Size
- More than 189,189 records (8/2018)

## Coverage
- 1971-present

## Updates
- Quarterly

## Language
- English

## Database Producer
- BIOVIA
- 5005 Wateridge Vista Drive
- San Diego, CA 92121
- Phone: 858-799-5000
- Support: 1-800-756-4674 or 858-799-5509
- Email: BIOVIA.Support@3ds.com
<table>
<thead>
<tr>
<th>Sources</th>
<th>Journal Articles, Government Reports, and Unpublished EPA Test Submissions (TSCATS).</th>
</tr>
</thead>
</table>
| User Aids | • Online Helps (HELP DIRECTORY lists all help messages available)  
• Comprehensive Guide to RTECS  
• STNGUIDE |
| Clusters | • CASRNS  
• GOVREGS  
• HEALTH  
• NUMERIC  
• SAFETY  
• TOXICOLOGY  
STN Database Clusters information (PDF). |
| Pricing | Enter HELP COST at an arrow prompt (=>). |
### Search and Display Field Codes

Fields that allow left truncation are marked with an asterisk (*).

<table>
<thead>
<tr>
<th>Search Field Name</th>
<th>Search Code</th>
<th>Search Examples</th>
<th>Display Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Index * (contains single words from the chemical name (CN), class identifier (CI), chemical definition (DEF), irritation data (IRR), toxicology data (TOX), reproductive effects data (REP), mutation data (MUT), tumorigenic effects data (TUM), other multiple dose data (OMUL), reviews (CREV, TREV), threshold limit value (TLV), standards and regulations (SREG), NIOSH recommendations (NREC), national occupational survey (SURV), and federal agency status (ASTA) fields, as well as RTECS numbers (RTN), molecular formulas (MF), and CAS Registry Numbers (RN))</td>
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<td>S MUS/ORGN (P) MUT/FA</td>
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<td>S (CARCINOMA(P)RODENT)/TUM</td>
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<td>S 17 G KG/TUM</td>
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<td>Toxicology Review (1)</td>
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<td>Tumorigenic Data (contains effect, route, organism,</td>
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<td>dose, and duration information) (1)</td>
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<tr>
<td>Wiswesser Line Notation</td>
<td>/WLN</td>
<td>S 10SW5SW10/WLN</td>
<td>WLN</td>
</tr>
</tbody>
</table>

(1) Implied (S) proximity is available in this field.
(2) Includes the prime name and synonyms. Foreign names have the language in parentheses after the name, e.g., Cui Xing AN (Chinese). Trade names that are obsolete have (Obs.) following the name, e.g., Textilon (Obs.).
(3) Numeric search field that may be searched with numeric operators or ranges.
(4) Units are not searchable in the /DOSE search field.
(5) EXPAND with codes to see definitions, e.g., E V10/EFF.
(6) Use the FULL display formats, e.g., OMULFULL, to see the full references.
## Property Search and Display Field Codes

<table>
<thead>
<tr>
<th>Property Search Field Name</th>
<th>Default Unit</th>
<th>Search Code</th>
<th>Search Examples</th>
<th>Display Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lethal Concentration Fifty, Aerosol (includes data from TOX) (1)</td>
<td>mg/m**3</td>
<td>/LC50A</td>
<td>S 11+-1/LC50A</td>
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<td>ppm</td>
<td>/LC50V</td>
<td>S LC50A&gt;20 g/m**3</td>
<td>OMUL, TOX</td>
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<td>S 175/LC50V</td>
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<td>Lethal Concentration Fifty, Vapor (includes data from TOX) (1)</td>
<td>mg/m**3</td>
<td>/LCLOA</td>
<td>S 65-70/LCLOA</td>
<td>OMUL, TOX</td>
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<tr>
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<td>ppm</td>
<td>/LCLOV</td>
<td>S 10&lt;=LCLOV</td>
<td>OMUL, TOX</td>
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<tr>
<td>Lethal Concentration Low, Aerosol (includes data from TOX) (1)</td>
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<td>LD50&lt;1 UG/G(P)TOX/FA</td>
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<td>/LDLO</td>
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<td>/TCLOA</td>
<td>S TCLOA&gt;250</td>
<td>OMUL, REP, TOX, TUM</td>
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<td>S 14/TDLO</td>
<td>OMUL, REP, TOX, TUM</td>
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</tbody>
</table>

(1) Numeric search field that may be searched with numeric operators or ranges.
**RTECS**

**DISPLAY and PRINT Formats**

Any combination formats may be used to display or print answers. Multiple codes must be separated by spaces or commas, e.g., D L1 RN CN STR 4. The fields are displayed or printed in the order requested.

Hit-term highlighting is available in the following display fields: AN, CI, CN (only first name is highlighted), DATE, DEF, FW, MF, RN, RTN, and WLN. Highlighting must be ON during SEARCH to use the HIT, KWIC, and OCC formats.

<table>
<thead>
<tr>
<th>Format</th>
<th>Content</th>
<th>Examples</th>
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<tbody>
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<td>AN</td>
<td>Accession Number</td>
<td>D L4 1-4 AN</td>
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<tr>
<td>ASTA</td>
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<td>Chemical Name</td>
<td>D 1-3,7,8 CN</td>
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<td>D DATE 1-5</td>
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<td>Definitions</td>
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<td>Field Availability</td>
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<td>NIOSH recommendations with source information</td>
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<td>Tabular display of toxicity data (Effect, Route, Organism, Dose, Duration, Source)</td>
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<td>Tabular display of tumorigenic data (Effect, Route, Organism, Dose, Duration, Source)</td>
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<td>Wiswesser Line Notation</td>
<td>D L4 WLN 3</td>
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<td>CREV, TREV, TLV</td>
<td>D 1-3,5 BIB</td>
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<td>Content</td>
<td>Examples</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>SREGFULL</td>
<td>SREG with all sources listed under one heading and the complete standards and regulations references cited in the sources</td>
<td>D SREGFULL 2 L4</td>
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<tr>
<td>TLVFULL</td>
<td>TLV with all sources listed under one heading and the complete threshold limit value references cited in the sources</td>
<td>D L7 TLVFULL</td>
</tr>
<tr>
<td>TOXFULL</td>
<td>TOX and the complete toxicity data references cited in the sources</td>
<td>D TOXFULL 1-3</td>
</tr>
<tr>
<td>TREVFULL</td>
<td>TREV with sources listed under one heading and the complete toxicology review references cited in the sources</td>
<td>D TREVFULL</td>
</tr>
<tr>
<td>TUMFULL</td>
<td>TUM and complete tumorigenic data references cited in the sources</td>
<td>D 3 TUMFULL</td>
</tr>
<tr>
<td>HIT</td>
<td>Fields containing hit terms. When the hit term occurs in a table, only the line containing the hit term is displayed.</td>
<td>D HIT</td>
</tr>
<tr>
<td>KWIC</td>
<td>Hit term with 20 words on either side (KeyWord-In-Context)</td>
<td>D KWIC NOH</td>
</tr>
<tr>
<td>OCC (1)</td>
<td>Number of occurrences of hit terms and fields in which they occur</td>
<td>D OCC 1-5</td>
</tr>
</tbody>
</table>

(1) No online display fee for this format.
(2) Custom display only.
(3) Stereo structure diagrams are available only on graphics terminals and in offline prints.
(4) Only the first name in the CN field is displayed.
**SELECT, ANALYZE, and SORT Fields**

The SELECT command is used to create E-numbers or an L-number containing terms from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

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<tr>
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<th>Field Code</th>
<th>ANALYZE/SELECT</th>
<th>SORT</th>
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<tr>
<td>Accession Number</td>
<td>AN</td>
<td>Y (1)</td>
<td>N</td>
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<tr>
<td>Cancer Review</td>
<td>CREV</td>
<td>Y (2)</td>
<td>N</td>
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<td>CAS Registry Number</td>
<td>RN</td>
<td>Y (3)</td>
<td>Y</td>
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<tr>
<td>CAS Registry Number and Chemical Name</td>
<td>CHEM</td>
<td>Y (3,4)</td>
<td>N</td>
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<tr>
<td>Cell Type</td>
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<td>CN</td>
<td>Y (5)</td>
<td>Y</td>
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<td>CI</td>
<td>Y</td>
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<td>Definitions</td>
<td>DEF</td>
<td>Y (3)</td>
<td>N</td>
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<td>Effect</td>
<td>EFF</td>
<td>Y (2)</td>
<td>N</td>
</tr>
<tr>
<td>Federal Agency Status (EPA, NIOSH, NTP, OSHA)</td>
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<td>Formula Weight</td>
<td>FW</td>
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<td>Y (default)</td>
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<td>Molecular Weight</td>
<td>MW</td>
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<td>National Occupational Survey (NOHS, NOES)</td>
<td>SURV</td>
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<tr>
<td>NIOSH Recommendations</td>
<td>NREC</td>
<td>Y (2)</td>
<td>N</td>
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<td>Occurrence Count of Hit Terms</td>
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<td>Y</td>
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<td>ORGN</td>
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</tr>
<tr>
<td>Route</td>
<td>RTE</td>
<td>Y (2)</td>
<td>N</td>
</tr>
<tr>
<td>RTECS Entry/Update Date</td>
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<td>Y</td>
<td>Y</td>
</tr>
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<td>RTECS Number</td>
<td>RTN</td>
<td>Y</td>
<td>Y</td>
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<td>Source</td>
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<td>N</td>
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<td>Toxicology Review</td>
<td>TREV</td>
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<tr>
<td>Wiswesser Line Notation</td>
<td>WLN</td>
<td>Y</td>
<td>Y</td>
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</tbody>
</table>

(1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT MF.
(2) SELECT HIT and ANALYZE HIT are not valid with this field.
(3) Appends /BI to the terms created by SELECT.
(4) SELECT HIT and ANALYZE HIT are valid only when search term is the first name in the CN field or is a CAS Registry Number.
(5) SELECT HIT and ANALYZE HIT are valid only when search term is the first name.
(6) Selects or analyzes the CODEN with /SO appended to the terms created by SELECT.
Sample Records

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<td>Class Identifier (CI): Tumorigen; Mutagen</td>
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<td>Entry/Update Date (DATE): Jul 2012</td>
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<td>Character Count: 3684</td>
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**DISPLAY ALL**

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<tr>
<th>CAS Registry Number (RN): 219959-86-1</th>
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<td>Chemical Name (CN): Benzenamine, 4-(9H-pyrido(3,4-b)indol-9-yl)-; 9-(4'-Aminophenyl)-9H-pyrido(3,4-b)indole; Aminophenylnorharman</td>
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**MUTATION DATA (MUT):**

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<th>Dose</th>
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<th>Source</th>
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<td>lung</td>
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<td>6H</td>
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August 2018
<table>
<thead>
<tr>
<th>Effect</th>
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<th>Dose</th>
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<tbody>
<tr>
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<td>DOSE</td>
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<td>rat</td>
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<td>V03;L60;V16</td>
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TUMORIGENIC DATA REFERENCES:
CALEDQ Cancer Letters (Shannon, Ireland) (Elsevier Scientific Pub. Ireland Ltd., POB 85, Limerick, Ireland) V.1- 1975-
JTPAE7 Journal of Toxicologic Pathology (Nihon Dokusei Byori Gakkai, editor, 3-25-8 Nishi- shinbashi, Minato-ku, Tokyo 105, Japan) V.1- 1988

TOXICITY DATA (TOX):
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<th>Source</th>
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<tbody>
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<td>DOSE</td>
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</table>
### TOXICITY DATA REFERENCES:

TXAPA9 Toxicology and Applied Pharmacology (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959-

### OTHER MULTIPLE DOSE DATA (OMUL):

<table>
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<th>Effect</th>
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<th>Organism</th>
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### OTHER MULTIPLE DOSE REFERENCES:

CRNGDP Carcinogenesis (London) (Oxford Univ. Press, Pinkhill House, Southfield Road, Eynsham, Oxford OX8 1JJ, UK) V.1- 1980-

### TOXICOLOGY REVIEW (TREV):

TOXICOLOGY REVIEW MUREAV 562,19,2004
TOXICOLOGY REVIEW EMMUEG 45,150,2005
TOXICOLOGY REVIEW MUREAV 721,27,2011

### TOXICOLOGY REVIEW REFERENCES:

MUREAV Mutation Research (Elsevier Science Pub. B.V., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1964-

EMMUEG Environmental and Molecular Mutagenesis (Alan R. Liss, Inc., 41 E. 11th St., New York, NY 10003) V.10- 1987-