

Registry of Toxic Effects of Chemical Substances (RTECS®)

FILE DESCRIPTION

The **Registry of Toxic Effects of Chemical Substances (RTECS®)** is a comprehensive database of basic toxicity information for over 150,000 chemical substances including: prescription and non-prescription drugs, food additives, pesticides, fungicides, herbicides, solvents, diluents, chemical wastes, reaction products of chemical waste, and substances used in both industrial and household situations. Reports of the toxic effects of each compound are cited. In addition to toxic effects and general toxicology reviews, data on skin and/or eye irritation, mutation, reproductive consequences and tumorigenicity are provided. Federal standards and regulations, NIOSH recommended exposure limits and information on the activities of the EPA, NIOSH, NTP, and OSHA regarding the substance are also included. The toxic effects are linked to literature citations from both published and unpublished governmental reports, and published articles from the scientific literature. The database corresponds to the print version of the *Registry of Toxic Effects of Chemical Substances*, formerly known as the *Toxic Substances List* started in 1971. Originally prepared by the National Institute for Occupational Safety and Health (NIOSH), the RTECS® database is now produced and distributed by Symyx Technologies, Inc.

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SUBJECT COVERAGE

- Chemical Identity and Class
- Irritation Data
- Mutation Data
- NIOSH Criteria Documents
- NTP, NIOSH, and EPA Status
- Reproductive Effects Data
- Standards and Regulations
- Toxicology Reviews
- Tumorigenic Effects Data

TIPS

USE FILE 336

to find basic toxicity information for frequently used household and industrial chemical substances such as drugs, food additives, pesticides, solvents, chemical wastes, etc.

USE NA=

to search an exact substance name.

SELECT NA=TOLUENE

USE /NA

to search for all substance names that include a specific segment.

SELECT TOLUENE/NA

USE MAP RN T

to create a temporary SearchSave of CAS®Registry Numbers for further searching in other databases.

MAP RN TEMP S3/1-5

SOURCES

Toxicity information appearing in RTECS® is derived from reports of acute, chronic, lethal and non-lethal effects of chemical substances. The database includes information from the scientific literature, published governmental reports, and unpublished test data from the EPA TSCA test submissions database (TSCATS).

DIALOG FILE DATA

Inclusive Dates: June 1971 to the present

Update Frequency: Quarterly

File Size: 155,846 records as of Q1 2003

CONTACT

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File 336 Registry of Toxic Effects of Chemical Substances (RTECS®) SAMPLE RECORD

DIALOG(R)File 336:RTECS
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RR= 147191 RTECS Number: XT1575000
/CN,CN=,/NA,NA= Substance Name: Toluene, 2,4-dinitro-
RN= CAS Registry Number: 121-14-2 Molecular Formula: C7H6N2O4
MW= Molecular Weight: 0182.15
/SY,SY=,/NA,NA= Synonyms: 1-Methyl-2,4-dinitrobenzene ; 2,4-DNT ; 2,4-Dinitrotoluene ;
2,4-Dinitrotoluol ; 4-Methyl-1,3-dinitrobenzene ; Benzene,
1-methyl-2,4-dinitro- ; DNT ; Dinitrotoluene (OSHA) ; NCI-C01865 ; RCRA
waste number U105
CL= Compound Class: Tumorigen; Mutagen; Reproductive Effector; Primary Irritant
LN= Wiswesser Line Notation: WNR B1 ENW
RD= Record Date: 200210

/IR, IR= IRRITATION DATA:
RT=, EF=, CD= Skin Rabbit 500 mg/24H Mild NTIS** AD-B011-150

/MU, MU= MUTATION DATA:
TS=, SP=, DO= Mutation in microorganisms Salmonella typhimurium 10 ug/plate
CD= NTIS** AD-A080-146
Mutation in microorganisms Salmonella typhimurium 125 ug/plate
ENMUDM 7(Suppl)
Other mutation test systems Salmonella typhimurium 50 mg/L
MUREAV 272,91,1992
TS=, SP= Sex chromosome loss and nondisjunction Drosophila melanogaster
RT=, DO=, CD= Parenteral 200 ppm ENMUDM 7,677,1985
TS=,SP=,RT=,DO= Morphological transformation Rat Oral 567 mg/kg/3W-C CRNGDP
CD= 7,1797,1986
DNA adduct Rat Oral 10 mg/kg JTEHD6 11,555,1983
(...)

/RE, RE= REPRODUCTIVE EFFECTS DATA:
EF=,RT=,SP=,TY= Pre-implantation mortality ;Other measures of fertility Oral Rat TDLo
DO=, DU=, CD= 3094 mg/kg 13W male NTIS** AD-A077-692
Spermatogenesis (including genetic material, sperm morphology, Oral Rat
TDLo 8463 mg/kg 13W male JACTDZ 4(4),243,1985

/TU, TU= TUMORIGENIC EFFECTS DATA:
EF=, RT=, SP= Neoplastic by RTECS criteria ; Skin and appendages--Tumors ; Oral Rat
TY=, DO=, CD= TDLo 2620 mg/kg/78W-C NCITR* NCI-TR-54,1978
Carcinogenic by RTECS criteria ; Kidney Tumors ; Oral Mouse TDLo
10080 mg/kg/2Y-C JACTDZ 4(4),257,1985
Neoplastic by RTECS criteria ; Skin and appendages--Tumors ; Oral Rat
TD 5460 mg/kg/78W-C NCITR* NCI-TR-54,1978
Carcinogenic by RTECS criteria ; Liver--Tumors ; Weight loss or decreased
weight gain ; Oral Rat TD 28 gm/kg/2Y-C NTIS** AD-A080-146
Equivocal tumorigenic agent by RTECS criteria ; Liver--Tumors ; Oral
Rat TD 12775 mg/kg/Y-C PAACA3 24,91,1983
Neoplastic by RTECS criteria ; Bladder Tumors ; Kidney Tumors ; Oral
Mouse TD 8760 mg/kg/2Y-C NCITR* NCI-TR-54,1978

/TX, TX= TOXICITY EFFECTS DATA:
RT=,SP=,TY=,DO=,CD= * Oral Rat LD50 268 mg/kg NTIS** PB214-270
* Oral Mouse LD50 790 mg/kg GTPZAB 25(8),50,1981
* Subcutaneous Cat LDLo 25 mg/kg XPHBAO 271,110,1941
* Skin Guinea pig LD50 >1 gm/kg NTIS** OTS0572393

/OM, OM= OTHER MULTIPLE DOSE EFFECTS DATA:
EF=, RT=, SP= Food intake (animal) ; Death in the "U" date type field ; Oral Rat
TY=, DO=, CD= TDLo 13195 mg/kg/13W-C JACTDZ 4(4),243,1985
Normocytic anemia ; Changes in other cell count (unspecified) ; Oral
Rat TDLo 24752 mg/kg/2Y-C JACTDZ 4(4),243,1985
Normocytic anemia ; Weight loss or decreased weight gain ; Changes in
testicular weight ; Oral Rat TDLo 12410 mg/kg/1Y-C NTIS**
AD-A077-692
Changes in liver weight ; Changes in serum composition (e.g., TP,
bilirubin, cholesterol) ; Changes in testicular weight ; Oral Rat
TDLo 76 gm/kg/26W-C JTSCDR 4,221,1979
(...)

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SAMPLE RECORD (cont'd)

	2-chome, Bunkyo-ku, Tokyo 113, Japan V.1- 1976- NTIS** National Technical Information Service. Springfield, VA 22161 Formerly U.S. Clearinghouse for Scientific & Technical Information. TXAPA9 Toxicology and Applied Pharmacology. Academic Press, Inc., 1 E. First St., Duluth, MN 55802 V.1- 1959-
CD=, JN= PU=	REVIEWS JOURNAL REFERENCES: IMEMDT IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man. WHO Publications Centre USA, 49 Sheridan Ave., Albany, NY 12210 V.1- 1972- NTIS** National Technical Information Service. Springfield, VA 22161 Formerly U.S. Clearinghouse for Scientific & Technical Information.
CD=, JN= PU=	STANDARDS & REGULATIONS JOURNAL REFERENCES: CFRGBR Code of Federal Regulations. U.S. Government Printing Office, Supt. of Documents, Washington, DC 20402
CD=, JN= PU=	NIOSH CRITERIA DOCUMENTS JOURNAL REFERENCES: NTP, NIOSH, EPA STATUS JOURNAL REFERENCES: NCITR* National Cancer Institute Carcinogenesis Technical Report Series. Bethesda, MD No.0-205. For publisher information, see NTPTR*.
DP=	DATA PRESENT: Irritation Effects; Mutation Effects; Reproductive Effects; Tumorigenic Effects; Toxicity Effects; Other Multiple Dose Effects; Reviews; Standards and Regulations; NIOSH Criteria Documents; NTP, NIOSH, EPA Status

SEARCH OPTIONS

BASIC INDEX

SEARCH SUFFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
— /CN	— CN	All Basic Index Fields Prime Chemical Name ¹	Word Segment & Word & Phrase	S ORAL(W)MOUSE(W)LD50 S NITRO/CN S TOLUENE/CN S TOLUENE, 2,4-DINITRO-/CN
/DF	DF	Chemical Definition ¹	Segment & Word	S ACETYL/DF S CRUDE(W)PRODUCT/DF
/EC	—	Element Count ¹	Word	S C7/EC
/IR	IR	Irritation Effects Data ^{1,2,3}	Word	S SKIN(W)RABBIT/IR
/MU	MU	Mutation Effects Data ^{1,2,3}	Word	S 200(W)PPM/MU
/NA	NA	Chemical Name ¹	Segment & Word & Phrase	S METHYL/NA S 1(W)METHYL/NA S 2,4-DNT/NA
/OM	OM	Other Multiple Effects Data ^{1,2,3}	Word	S ANEMIA/OM
/RE	RE	Reproductive Effects Data ^{1,2,3}	Word	S ORL(W)MUS(W)TDLO/RE
/SY	SY	Chemical Synonym ¹	Segment & Word & Phrase	S TOLUENE/SY S 2(W)4(W)DINITROTOLUENE/SY S NCI-C01865/SY
/TU	TU	Tumorigenic Effects Data ^{1,2,3}	Word	S ORL(W)MUS/TU
/TX	TX	Toxicity Effects Data ^{1,2,3}	Word	S ORL(W)MUS(W)LD50/TX

¹ Searchable in the Basic Index and in the Additional Indexes.

² Displays abbreviated codes.

³ Contains both abbreviated and unabbreviated text. When searching effects data, abbreviated and unabbreviated terms should not be mixed. For example, to search for results of oral cytogenetic analysis tests involving mutation, enter: S CYT(S)ORL/MU or S CYTOGENETIC(W)ANALYSIS(S)ORAL/MU.

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ADDITIONAL INDEXES

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
—	AN	DIALOG Accession Number		
BN=	BN	Beilstein Registry Number	Phrase	S BN=1901563
CD=	—	CODEN ⁴	Phrase	S CD=ENMUDM
CL=	CL	Compound Class	Phrase	S CL=MUTAGEN
CN=	CN	Prime Chemical Name ¹	Phrase	S CN=TOLUENE, 2,4-DINITRO-
CT=	—	Cell Type ³	Phrase	S CT=LYMPHOCYTE
DC=	DC	NIOSH Criteria Documents	Word	S DC=(LOWEST(W)LEVEL)
DF=	DF	Chemical Definition ¹	Word	S DF=(CATCHPOT(W)PRODUCT)
DO=	—	Dosage	Numeric	S DO=567
DP=	DP	Data Present	Phrase	S DP=TOXICITY EFFECTS
DU=	—	Duration ¹	Phrase	S DU=13W MALE?
EC=	—	Element Count ¹	Phrase	S EC=C0007
EF=	—	Effect ³	Word	S EF=MLD
—	FI	Full Irritation Effects Data ⁵		
—	FM	Full Mutation Effects Data ⁵		
—	FO	Full Other Multiple Effects Data ⁵		
—	FR	Full Reproductive Effects Data ⁵		
—	FT	Full Tumorigenic Effects Data ⁵		
—	FV	Full Reviews List ⁵		
—	FX	Full Toxicity Effects Data ⁵		
GN=	—	Group Number	Phrase	S GN=A5
IR=	IR	Irritation Effects Data ^{1,2,3}	Word	S IR=(SKN(W)RBT)
—	JC	NIOSH Criteria Documents Journals		
—	JI	Irritation Data Journals		
—	JM	Mutation Data Journals		
JN=	—	Journal Name	Phrase	S JN=MUTATION RES?
—	JO	NTP, NIOSH, EPA Status Journals		
—	JR	Reproductive Data Journals		
—	JS	Standards and Regulations Journals		
—	JT	Tumorigenic Data Journals		
—	JV	Reviews Data Journals		
—	JX	Toxicity Data Journals		
—	JZ	Other Multiple Dose Data Journals		
LN=	LN	Wiswesser Line Notation	Phrase	S LN=WNR B1 ENW
ME=	—	Molecular Element	Phrase	S ME=CHNO
MF=	MF	Molecular Formula	Phrase	S MF=C7H6N2O4
MU=	MU	Mutation Effects Data ^{1,2,3}	Word	S MU=(10(W)UG)
MW=	MW	Molecular Weight	Numeric	S MW=182.15
NA=	NA	Chemical Name ¹	Phrase	S NA=DINITROTOLUENE?
NC=	—	Number of Components	Numeric	S NC=1
NE=	—	Number of Elements	Numeric	S NE=4
OM=	OM	Other Multiple Dose Effects Data ^{2,3}	Word	S OM=ANEMIA
PI=	—	Periodic Index Term	Phrase	S PI=A56
PT=	—	Periodic Transition Row	Phrase	S PT=T2
PU=	—	Publisher	Word	S PU=(ELSEVIER(W)SCI?)
RD=	RD	Record Update Date	Phrase	S RD=199707
RE=	RE	Reproductive Effects Data ^{1,2,3}	Word	S RE=(410(W)MG)
RG=	RG	Standards and Regulations	Word	S RG=OSHAPEL
RN=	RN	CAS(R) Registry Number	Phrase	S RN=121142
RR=	RR	RTECS Number	Phrase	S RR=XT1575000
RT=	—	Route ^{1,3}	Phrase	S RT=ORAL
RV=	RV	Reviews	Word & Phrase	S RV=(ACGIH(W)TLV) S RV=TOXICOLOGY REVIEW S RV=TOXICOLOGY REVIEW
SO=	SO	Beilstein Source Reference	Phrase	S SO=4-05-00-00951
SP=	—	Species ^{1,3}	Phrase	S SP=DMG S SP=DROSOPHILA MELANOGASTER
ST=	ST	NTP, NIOSH, EPA Status	Word	S ST=(EPA(W)GENETOX)
SY=	SY	Chemical Synonym ¹	Phrase	S SY=2,4-DNT
TS=	—	Test System ^{1,3}	Phrase	S TS=DNA DAMAGE
TU=	TU	Tumorigenic Effects Data ^{1,2,3}	Word	S TU=(ORL(W)RAT)
TX=	TX	Toxicity Effects Data ^{1,2,3}	Word	S TX=(MOUSE(W)LD50)
TY=	—	Type of Exposure ^{1,3}	Word	S TY=TDLO
UD=	—	Update	Phrase	S UD=2003Q1

⁴ This field includes the standard CODEN as well as some special codes such as NTIS**, NCITR*, etc. for government documents. There are many Map codes for CODEN (CD) that utilize the code for CODEN (CD) plus the data section code, e.g., CDTX maps the CODEN for the Toxic Effects Data journals (code TX).

⁵ Displays unabbreviated text.

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SPECIAL FEATURES

For command descriptions, enter HELP LIMIT, HELP SORT, HELP RANK, HELP MAP online.

LIMIT	/ -- DIALOG Accession Number /NONTOX -- Non-Toxicity Effects Data /TOX -- Toxicity Effects Data	S S3/450840-999999 S S5/NONTOX S S3/TOX
SORT	CN, MF	SORT S13/ALL/CN/MF PRINT S2/5/1-24/CN
RANK	All phrase- and numeric-indexed fields in the Additional Indexes can be ranked.	RANK NA RANK SP S4
MAP	BN, CD, CDDC, CDDF, CDIR, CDMU, CDRE, CDRG, CDRV, CDST, CDTU, CDTX, RN, SY, SYRN, RR, SO	MAP CDDC TEMP S2

PREDEFINED FORMAT OPTIONS

NO.	DIALOGWEB FORMAT	RECORD CONTENT
1	--	DIALOG Accession Number
2	--	DIALOG Accession Number, RTECS Number, Chemical Name, Synonyms, CAS Registry Number, Beilstein Registry Number, Beilstein Source Citation, Molecular Formula, Compound Class, Compound Definition, Wiswesser Line Notation, Record Date, Toxicity Information
3	Medium	DIALOG Accession Number, RTECS Number, Chemical Name, Synonyms, Reviews, Standards and Regulations, NIOSH Criteria, EPA Status, Data Present and Full Journal Information
4	--	DIALOG Accession Number, RTECS Number, Chemical Name, Synonyms, and Toxicity Information
5	Long	Full Record with Abbreviated Text
6	Free	DIALOG Accession Number, RTECS Number, Chemical Name, Synonyms, CAS Registry Number, Beilstein Registry Number, Molecular Formula, Compound Class, Compound Definition, Wiswesser Line Notation, Record Update Date, and Data Present
7	--	DIALOG Accession Number, RTECS Number, Chemical Name, Synonyms, CAS Registry Number, Beilstein Registry Number, Molecular Formula, Compound Class, Compound Definition, Wiswesser Line Notation, Record Update Date, and Data Present
8	Short	DIALOG Accession Number, RTECS Number, Chemical Name, Synonyms, Record Update Date, and Data Present
9	Full	Full Record with Unabbreviated Text
K	--	KWIC (Key Word In Context) displays a window of text; may be used alone or with other formats

OTHER OUTPUT OPTIONS

For an explanation, enter HELP TYPE, HELP UDF, HELP TAG online.

USER DEFINED FORMATS	Display codes listed in the Search Options tables can be used to customize output.	TYPE S3/6,FX,JX/1-5
TAG	Output can be displayed with tags identifying each display field.	TYPE S2/3/1-5 TAG
DIRECT RECORD ACCESS	If the accession number of a specific record is known, it can be used to display the record directly.	TYPE 93220/5 DISPLAY 92116/6,TU,JT PRINT 93220/9

FOR ONLINE HELP:

See HELP FIELDS 336 for searchable fields; HELP FORMAT 336 for output formats; HELP LIMIT 336 for limits; HELP RATES 336 for cost information; HELP SORT 336 for sorts.