



CHEMpendium™

Essential Chemical Safety Information for Workplaces and the Environment

*Your one-stop source for reliable information
on chemical hazards*

CHEMpendium™ from CCOHS
– a trusted source for
essential information on:

Workplace safety
Regulatory compliance
Emergency response
Health hazards
Environmental effects
Right-to-know

Why search through many references for chemical information when CHEMpendium™ puts a collection of important chemical hazard resources right on your desktop?

Compiled by CCOHS, CHEMpendium™ is a collection of essential databases that meets the broad needs of today's environmental, health and safety practitioners.

Improve productivity and effectiveness with reliable information from authoritative sources.

The CHEMpendium™ Collection of Essential Databases

What our clients are saying

"...information is the basis for a number of decisions I make on a daily basis. CCOHS databases and publications, are a big help to me and I use them all the time. For years, I have depended on CCOHS to do the legwork for me, and provide me with readily available, up-to-date scientific information in a format I can access quickly."

HARVEY PUKIN
Occupational Health and Safety Officer
Prairie and Northern Region
Environment Canada

Only CHEMpendium™ offers you:

Comprehensive information that is easy to search and easy to understand

Cross-database search capability (using Windows™ software)

Multi-user access

Regular updates, provided by CCOHS professionals

PLUS Exceptional client service and support from the CCOHS team of OSH, environmental and IT experts – included free with your subscription!

Featuring CHEMINFO

Produced by CCOHS' occupational health and safety specialists, CHEMINFO is acknowledged internationally as one of the most comprehensive and up-to-date chemical safety resources available anywhere.

- › Detailed profiles of more than 1,700 important workplace chemicals, including health, fire and reactivity hazards and safe work practices
- › Easy-to-understand health effects summaries, fully referenced using authoritative sources including original literature
- › Recommendations on handling and storage, personal protective equipment, accidental release, first aid and more
- › International hazard classifications, including WHMIS, OSHA and the European Union
- › The only source of WHMIS classifications that provides the *detailed rationale* for the classification
- › Valuable regulatory guidance data such as Transportation of Dangerous Goods, workplace exposure limits and more.

Our Canadian and international clients save time and money when they use CHEMINFO to:

- › Prepare, write and verify MSDSs
- › Deliver informed and accurate responses to specific chemical questions
- › Recommend safe handling and storage procedures
- › Develop respiratory protection and other PPE programs
- › Conduct workplace risk assessments
- › Assist in developing emergency preparedness plans and in responding to hazardous materials incidents
- › Develop site first aid and medical programs
- › Prepare chemical-specific training tools
- › Comply with new regulatory initiatives like REACH and GHS

Also on CHEMpendium™

CHEMINDEX

Listing of more than 580,000 chemical substances, including CAS registry numbers, chemical names and synonyms that indicate which CCOHS databases contain information on that substance

Easy way to link CAS registry numbers and chemical names

HSDB®

Hazardous Substances Data Bank

Comprehensive, peer-reviewed data profiles (150 fields) on more than 5,000 potentially toxic chemicals, created and updated by the U.S. National Library of Medicine

Wide range of standards, guidelines and regulatory data for use by environmental, workplace and transport personnel

Excellent source of hard-to-find data for chemicals on topics including toxic effects, environmental fate, and accident reports

DSL/NDSL

Domestic Substances List/Non-Domestic Substances List

Canadian regulatory inventory including over 70,000 world-wide commercial chemical substances

Useful for chemical manufacturers, suppliers and importers needing to identify whether a chemical substance is considered *existing* or *new* to Canada, in accordance with Canadian Environmental Protection Act (CEPA) guidelines

CESARS

Chemical Evaluation Search and Retrieval System

More than 800 profiles on chemicals of environmental concern, provided by the Michigan Department of Environmental Quality and the Ontario Ministry of the Environment

Detailed environmental hazard data including toxicity to animals, humans and plants

CHRIS

Chemical Hazards Response Information System

Emergency response and hazard information on 1,300 chemicals, prepared by the US Coast Guard

Practical response recommendations and extensive lists of hazard ratings and classifications, including hazardous materials transport, water shipment and water pollution

NIOSH Pocket Guide to Chemical Hazards

Internationally recognized reference for evaluating workplace chemical hazards

Concise industrial hygiene data for nearly 700 chemicals, including symptoms of exposure, exposure limits, respirator selections and protective measures

NEW JERSEY HAZARDOUS SUBSTANCE FACT SHEETS

Easy-to-understand fact sheets on more than 1700 chemicals covering health hazards, safety measures and more

Useful glossary of terms, plus basic questions and answers are included in each fact sheet

This complete collection is available as part of CCOHS' web service and on CD-ROM!

Try it for yourself!

Visit <http://www.ccohs.ca> and view the search results quickly with this simple user interface – but remember you'll need a user name and password to view the *full* records.

Contact Client Services at
1-800-668-4284 or clientservices@ccohs.ca

or

www.ccohs.ca/products/ordering/freetrial for FREE Trials.





CCOHS – a trusted source

The Canadian Centre for Occupational Health & Safety (CCOHS) is Canada's national resource for the advancement of workplace health and safety.

CCOHS promotes the total well-being -

physical, psychosocial and mental

health - of working Canadians by

providing information, training,

education, management systems and

solutions that support health and

safety programs and the prevention of

injury and illness.

CCOHS is governed by a Council with

representatives from employers, labour

and governments and is committed to

providing impartial and accurate

information services.

Canadian Centre for Occupational Health and Safety
CHEMINFO Chemical Profiles Created by CCOHS

CCOHS Chemical Name: Toluene

Record Contents

Format: All Sections 2

- Chemical Identification
- Description
- Hazard Identification
- Toxicologic Studies
- Personal Health Effects
- First Aid Measures
- Fire Fighting Measures
- Accidental Release Measures
- Handling and Storage
- Exposure Control/Personal Protection
- Exposure Guidelines
- Physical and Chemical Properties
- Stability and Reactivity
- Transportation Information
- Biological Information
- Occupational Considerations
- Transport Information
- Regulatory Information
- Canadian Workplace Hazardous Materials Information System Information

REFRESH RECORD

SECTION 1. CHEMICAL IDENTIFICATION

CHEMINFO Record Number: 243
CCOHS Chemical Name: Toluene

Synonyms:
Methylbenzene
Methylbenzol
Phenylmethane
Toluol

Chemical Name French: Toluène
Chemical Name Spanish: Tolueno

Trade Name(s):
Methacel

CAS Registry Number: 108-88-3
UN/NA Number(s): 1294
RTECS Number(s): X55250000
EU EINECS/ELINCS Number: 203-625-9

Chemical Family: Aromatic hydrocarbon / alkylbenzene / monoalkylbenzene
Molecular Formula: C7-H8
Structural Formula: C6H5-CH3



A sample CHEMINFO record showing the results of a search for "Toluene".

Reproductive Toxicity:

Toluene is not considered a reproductive hazard. No conclusions can be drawn based on the available human information. Reproductive effects have not been observed in animal studies.

A review of toluene and its potential to cause reproductive toxicity in workers has been published.(38) Three cross-sectional studies evaluated fertility in women exposed to toluene or in the wives of exposed men. No conclusions can be drawn based on these studies due to limitations such as selection bias, recall bias, and the fact that the workers were exposed to other potentially harmful chemicals. Another study suggests that menstrual function is not affected by exposure to toluene.(15)

A case report describes testicular atrophy and reduced spermatogenesis in one man who abused toluene for 10 years.(8) This extreme exposure situation is not relevant to occupational exposures.

Mutagenicity:

There is insufficient information available to conclude that toluene is mutagenic. Results from human studies are inconclusive. Both positive and negative results have been obtained in studies for various mutagenic effects in peripheral blood lymphocytes of workers exposed to toluene. In some studies, the workers were exposed to many organic solvents. However, most of the studies were conducted with rotogravure printing plant workers who were exposed primarily to toluene, but also have concurrent exposure to printing ink.(2,3,30,39,60) In one study of 42 printing workers exposed for an average of 18.9 years, there was a significant increase in sister chromatid exchanges (SCEs) in peripheral lymphocytes in the exposed workers compared to 45 unexposed controls after accounting for the influence of alcohol and smoking. The workers were concurrently exposed to ink.(109) Positive results have also been obtained in studies where there was concurrent exposure to benzene (a mutagen) and/or where smoking could not be eliminated as a causative factor.(59) A negative result (SCEs in peripheral blood lymphocytes) was obtained in 5 male volunteers exposed to 50 ppm of toluene over 3 consecutive days (7 hr/d), repeated 3 times at 2-week intervals.(62) In animal studies, negative results were obtained in rats and mice exposed orally or by inhalation. Toluene has caused mutagenicity in animal studies using routes of exposure that are not relevant to occupational situations. Negative results were obtained at non-toxic doses in cultured mammalian cells, in several tests using bacteria and in a test using yeast. Negative and positive results were obtained in fruit flies (Drosophila).

Toxicologically Synergistic Materials:

Combined exposure to toluene and noise, toluene and n-hexane, toluene and aspirin or toluene, ethylbenzene and noise has caused a synergistic loss of hearing in animal studies. Increased hearing loss has also been observed in workers in some studies following long-term exposure to toluene and noise.

Available via Web, CD or Intranet.
Multi-user licenses available.

Contact Client Services for details

Ordering

To place your order, or request a **FREE** trial, contact CCOHS Client Services at:



Phone **1-800-668-4284** (Canada or US)

1-905-570-8094 (International)

Fax **905-572-4500**

E-mail **clientservices@ccohs.ca**

Visit us on the Web at

www.ccohs.ca

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CDN

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-) FREE client support
-) bi-monthly e-newsletter, LIAISON



Related Information Sources also available from CCOHS

MSDS More than 320,000 current Material Safety Data Sheets (MSDSs) directly from suppliers and manufacturers.

CHEMINFO Comprehensive, practical occupational health and safety information on chemicals.

RTECS The Registry of Toxic Effects of Chemical Substances (RTECS) provides critical toxicological information with citations on more than 165,000 chemical substances.

IPCS INCHEM Authoritative collection of chemical safety publications and database records from the world's top international bodies concerned with sound management of chemicals.

MSDS Management Service to help you manage your OSH responsibilities relating to MSDSs and WHMIS requirements.

Canadian enviroOSH Legislation Complete text of all Canadian health, safety and environmental legislation, critical guidelines and codes of practice. Available in *National*, *Regional* and *plus Standards* versions.