

1,3-Dichlorobenzene; CASRN 541-73-1

Human health assessment information on a chemical substance is included in the IRIS database only after a comprehensive review of toxicity data, as outlined in the [IRIS assessment development process](#). Sections I (Health Hazard Assessments for Noncarcinogenic Effects) and II (Carcinogenicity Assessment for Lifetime Exposure) present the conclusions that were reached during the assessment development process. Supporting information and explanations of the methods used to derive the values given in IRIS are provided in the [guidance documents located on the IRIS website](#).

STATUS OF DATA FOR 1,3-Dichlorobenzene

File First On-Line 09/01/1990

Category (section)	Assessment Available?	Last Revised
Oral RfD (I.A.)	not evaluated	
Inhalation RfC (I.B.)	not evaluated	
Carcinogenicity Assessment (II.)	yes	09/01/1990

I. Chronic Health Hazard Assessments for Noncarcinogenic Effects

I.A. Reference Dose for Chronic Oral Exposure (RfD)

Substance Name — 1,3-Dichlorobenzene
CASRN — 541-73-1

Not available at this time.

I.B. Reference Concentration for Chronic Inhalation Exposure (RfC)

Substance Name — 1,3-Dichlorobenzene
CASRN — 541-73-1

Not available at this time.

II. Carcinogenicity Assessment for Lifetime Exposure

Substance Name — 1,3-Dichlorobenzene

CASRN — 541-73-1

Last Revised — 09/01/1990

Section II provides information on three aspects of the carcinogenic assessment for the substance in question; the weight-of-evidence judgment of the likelihood that the substance is a human carcinogen, and quantitative estimates of risk from oral exposure and from inhalation exposure. The quantitative risk estimates are presented in three ways. The slope factor is the result of application of a low-dose extrapolation procedure and is presented as the risk per (mg/kg)/day. The unit risk is the quantitative estimate in terms of either risk per ug/L drinking water or risk per ug/cu.m air breathed. The third form in which risk is presented is a drinking water or air concentration providing cancer risks of 1 in 10,000, 1 in 100,000 or 1 in 1,000,000. The rationale and methods used to develop the carcinogenicity information in IRIS are described in The Risk Assessment Guidelines of 1986 (EPA/600/8-87/045) and in the IRIS Background Document. IRIS summaries developed since the publication of EPA's more recent Proposed Guidelines for Carcinogen Risk Assessment also utilize those Guidelines where indicated (Federal Register 61(79):17960-18011, April 23, 1996). Users are referred to Section I of this IRIS file for information on long-term toxic effects other than carcinogenicity.

II.A. Evidence for Human Carcinogenicity

II.A.1. Weight-of-Evidence Characterization

Classification — D; not classifiable as to human carcinogenicity

Basis — Based on no human data, no animal data and limited genetic data.

II.A.2. Human Carcinogenicity Data

None.

II.A.3. Animal Carcinogenicity Data

None.

II.A.4. Supporting Data for Carcinogenicity

An increase in the number of revertants of an auxotrophic strain of *Aspergillus nidulans* occurred when spores were treated with 1,3-dichlorobenzene (concentration and length of treatment not stated). The spontaneous reversion frequency of the strain was 3/100,000 and the reversion frequency of treated spores 11/100,000; this increase was not statistically significant (Prasad and Pramer, 1968).

II.B. Quantitative Estimate of Carcinogenic Risk from Oral Exposure

None.

II.C. Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

None.

II.D. EPA Documentation, Review, and Contacts (Carcinogenicity Assessment)

II.D.1. EPA Documentation

Source Document — U.S. EPA, 1985

The 1985 Health Assessment Document for Chlorinated Benzenes has received Agency Review and approval for publication.

II.D.2. EPA Review (Carcinogenicity Assessment)

Agency Work Group Review — 12/06/1989

Verification Date — 12/06/1989

II.D.3. EPA Contacts (Carcinogenicity Assessment)

Please contact the IRIS Hotline for all questions concerning this assessment or IRIS, in general, at (202)566-1676 (phone), (202)566-1749 (FAX) or hotline.iris@epa.gov (internet address).

III. [reserved]

IV. [reserved]

V. [reserved]

VI. Bibliography

Substance Name — 1,3-Dichlorobenzene

CASRN — 541-73-1

VI.A. Oral RfD References

None

VI.B. Inhalation RfC References

None

VI.C. Carcinogenicity Assessment References

Prasad, I. and D. Pramer. 1968. Mutagenic activity of some chloranilines and chlorobenzenes. *Genetics*. 60: 212-213. (Abstr.)

U.S. EPA. 1985. Health Assessment Document for Chlorinated Benzenes. Prepared by the Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office, Cincinnati, OH, for the Office of Solid Waste and Emergency Response, Washington, DC.

VII. Revision History

Substance Name — 1,3-Dichlorobenzene

CASRN — 541-73-1

Date	Section	Description
09/01/1990	II.	Carcinogen assessment on-line

VIII. Synonyms

Substance Name — 1,3-Dichlorobenzene

CASRN — 541-73-1

Last Revised — 09/01/1990

- 541-73-1
- BENZENE, 1,3-DICHLORO-
- BENZENE, M-DICHLORO-
- 1,3-DICHLOROBENZENE
- M-DICHLOROBENZENE
- M-DICHLOROBENZOL
- HSDB 522
- M-PHENYLENE DICHLORIDE
- NSC 8754