

beta-Propiolactone; CASRN 57-57-8

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 beta-Propiolactone

File First On-Line 07/01/1991

Category (section)	Status	Last Revised
Oral RfD Assessment (I.A.)	no data	
Inhalation RfC Assessment (I.B.)	message	07/01/1991
Carcinogenicity Assessment (II.)	no data	03/01/1994

I. Chronic Health Hazard Assessments for Noncarcinogenic Effects

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

Substance Name — beta-Propiolactone
CASRN — 57-57-8

Not available at this time.

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

Substance Name — beta-Propiolactone
CASRN — 57-57-8

The health effects data for beta-propiolactone were reviewed by the U.S. EPA RfD/RfC Work Group and determined to be inadequate for the derivation of an inhalation RfC. The verification status of this chemical is currently not verifiable. For additional information on the health effects of this chemical, interested parties are referred to the EPA documentation listed below.

U.S. EPA. 1987. Reportable Quantity for beta-Propiolactone. 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.

Agency Work Group Review — 04/25/1991

EPA Contacts:

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).

Screening-Level Literature Review Findings — A screening-level review conducted by an EPA contractor of the more recent toxicology literature pertinent to the RfC for beta-Propiolactone conducted in August 2003 did not identify any critical new studies. IRIS users who know of important new studies may provide that information to the IRIS Hotline at hotline.iris@epa.gov or 202-566-1676.

II. Carcinogenicity Assessment for Lifetime Exposure

Substance Name — beta-Propiolactone
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Not available at this time.

III. [reserved]

IV. [reserved]

V. [reserved]

VI. Bibliography

Substance Name — beta-Propiolactone

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Last Revised — 07/01/1991

VI.A. Oral RfD References

None

VI.B. Inhalation RfC References

U.S. EPA. 1987. Reportable Quantity for beta-Propiolactone. 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.

VI.C. Carcinogenicity Assessment References

None

VII. Revision History

Substance Name — beta-Propiolactone

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Date	Section	Description
07/01/1991	I.B.	Inhalation RfC message on-line
07/01/1991	VI.	Bibliography on-line
03/01/1994	II.	Carcinogenicity assessment now under review

Date	Section	Description
08/01/1995	II.	EPA's RfD/RfC and CRAVE workgroups were discontinued in May, 1995. Chemical substance reviews that were not completed by September 1995 were taken out of IRIS review. The IRIS Pilot Program replaced the workgroup functions beginning in September, 1995.
04/01/1997	III., IV., V.	Drinking Water Health Advisories, EPA Regulatory Actions, and Supplementary Data were removed from IRIS on or before April 1997. IRIS users were directed to the appropriate EPA Program Offices for this information.
10/28/2003	I.B	Screening-Level Literature Review Findings message has been added.

VIII. Synonyms

Substance Name — beta-Propiolactone

CASRN — 57-57-8

Last Revised — 07/01/1991

- 57-57-8
- 2-Oxetanone
- beta-Propiolactone
- beta-PROPIOLAKTON [Czech]
- beta-PROPIONOLACTONE
- beta-PROPROLACTONE
- Betaprone
- Caswell No. 709
- EPA Pesticide Chemical Code 010901
- HSDB 811
- HYDRACRYLIC ACID beta-LACTONE
- Hydracrylic acid, beta-lactone
- NSC-21626
- Propanoic acid, 3-hydroxy-, beta-lactone
- Propanolide
- Propiolactona [Spanish]

- Propiolactone
- Propiolactonum [Latin]
- Propiolattone
- 1,3-PROPIOLACTONE
- 2-OXETANONE
- 3-HYDROXYPROPIONIC ACID LACTONE
- 3-PROPANOLIDE
- 3-PROPIOLACTONE