

## Nonabromodiphenyl ether; CASRN 63936-56-1

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 Nonabromodiphenyl ether

**File First On-Line 08/01/1990**

| Category (section)               | Assessment Available? | Last Revised |
|----------------------------------|-----------------------|--------------|
| Oral RfD (I.A.)                  | not evaluated         |              |
| Inhalation RfC (I.B.)            | not evaluated         |              |
| Carcinogenicity Assessment (II.) | yes                   | 08/01/1990   |

### I. Chronic Health Hazard Assessments for Noncarcinogenic Effects

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

Substance Name — Nonabromodiphenyl ether  
CASRN — 63936-56-1

Not available at this time.

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

Substance Name — Nonabromodiphenyl ether  
CASRN — 63936-56-1

Not available at this time.

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## **II. Carcinogenicity Assessment for Lifetime Exposure**

Substance Name — Nonabromodiphenyl ether

CASRN — 63936-56-1

Last Revised — 08/01/1990

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 — No human data and no animal data available.

#### **II.A.2. Human Carcinogenicity Data**

None.

#### **II.A.3. Animal Carcinogenicity Data**

None.

#### **II.A.4. Supporting Data for Carcinogenicity**

Nonabromodiphenyl ether is structurally-related to decabromodiphenyl ether, a possible human carcinogen.

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

None.

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

None.

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

##### **II.D.1. EPA Documentation**

Source Document — U.S. EPA, 1984

The 1984 Health and Environmental Effects Profile for Brominated Diphenyl Ethers has received Agency Review.

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

Agency Work Group Review — 06/15/1990

Verification Date — 06/15/1990

Screening-Level Literature Review Findings — A screening-level review conducted by an EPA contractor of the more recent toxicology literature pertinent to the cancer assessment for nonabromodiphenyl ether 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](mailto:hotline.iris@epa.gov) or 202-566-1676.

### **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](mailto:hotline.iris@epa.gov) (internet address).

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**III. [reserved]**

**IV. [reserved]**

**V. [reserved]**

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### **VI. Bibliography**

Substance Name — Nonabromodiphenyl ether  
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#### **VI.A. Oral RfD References**

None.

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#### **VI.B. Inhalation RfD References**

None.

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#### **VI.C. Carcinogenicity Assessment References**

U.S. EPA. 1984. Health and Environmental Effects Profile for Brominated Diphenyl Ethers. 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 — Nonabromodiphenyl ether  
CASRN — 63936-56-1

| Date       | Section | Description  |
|------------|---------|--|
| 08/01/1990 | II.     | Carcinogen assessment on-line                                      |
| 10/28/2003 | II.D.2  | Screening-Level Literature Review Findings message has been added. |

## VIII. Synonyms

Substance Name — Nonabromodiphenyl ether  
CASRN — 63936-56-1  
Last Revised — 08/01/1990

- 63936-56-1
- 68928-79-0
- 66169-95-7
- BENZENE, PENTABROMO(TETRABROMOPHENOXY)-
- NONABROMODIPHENYL ETHER
- NONABROMODIPHENYL OXIDE
- NONABROMOPHENOXYBENZENE
- PENTABROMO(TETRABROMOPHENOXY)BENZENE