

## Ammonium methacrylate; CASRN 16325-47-6

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 Ammonium methacrylate

File First On-Line 03/01/1991

Category (section)	Assessment Available?	Last Revised
Oral RfD (I.A.)	not evaluated	
Inhalation RfC (I.B.)	not evaluated	
Carcinogenicity Assessment (II.)	yes	03/01/1991*

\*A comprehensive review of toxicological studies was completed (May 22, 2006) - please see section II.D.2. for more information.

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

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

Substance Name — Ammonium methacrylate  
CASRN — 16325-47-6

Not available at this time.

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

Substance Name — Ammonium methacrylate  
CASRN — 16325-47-6

Not available at this time.

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

Substance Name — Ammonium methacrylate  
CASRN — 16325-47-6  
Last Revised — 03/01/1991

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.

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

None.

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

None.

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

Methacrylic acid, a dissociation product of ammonium methacrylate, was positive in a DNA-cell binding assay (Kubinski et al., 1981), but was not mutagenic in a reverse mutation assay using *Salmonella typhimurium* strains TA98, TA100, TA1535 and TA1537 (Haworth et al., 1983).

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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 — This assessment is not presented in any existing U.S. EPA document.

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

Agency Work Group Review — 11/07/1990

Verification Date — 11/07/1990

A comprehensive review of toxicological studies published through May 2006 was conducted. No new health effects data were identified that would be directly useful in the revision of the existing carcinogenicity assessment for Ammonium methacrylate and a change in the assessment is not warranted at this time. For more information, IRIS users may contact 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 — Ammonium methacrylate  
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#### **VI.A. Oral RfD References**

None

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#### **VI.B. Inhalation RfC References**

None

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

Haworth, S., T. Lawlor, K. Mortelmans, W. Speck and E. Zeiger. 1983. Salmonella mutagenicity test results for 250 chemicals. Environ. Mutagen. Suppl. 1: 3-6, 12-13, 108.

Kubinski, H., G.E. Gutzke and Z.O. Kubinski. 1981. DNA-cell binding (DCB) assay for suspected carcinogens and mutagens. Mutat. Res. 89: 95-136.

## VII. Revision History

Substance Name — Ammonium methacrylate

CASRN — 16325-47-6

Date	Section	Description
03/01/1991	II.	Carcinogenicity assessment on-line
12/03/2002	II.D.2.	Screening-Level Literature Review Findings message has been added.
07/05/2006	II.D.2.	Screening-Level Literature Review Findings message has been removed and replaced by comprehensive literature review conclusions.

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## VIII. Synonyms

Substance Name — Ammonium methacrylate

CASRN — 16325-47-6

Last Revised — 03/01/1991

- 16325-47-6
- 2-Propenoic acid, 2-methyl-, ammonium salt
- Ammonium methacrylate
- Ammonium 2-methyl-2-propenoate
- Methacrylic acid, ammonium salt
- 2-Propenoic acid, 2-methyl-, ammonium salt