

## 11–Aminoundecanoic acid

11–Aminoundecanoic acid is the monomer used in the manufacture of the polyamide, Nylon-11. Nylon-11 is used in automobile parts, industrial fabrics (e.g., filter bags), and in food packaging. Workers in these industries may be exposed, and exposure to the general public may occur from food packaging materials.

11–Aminoundecanoic acid passed the animal data screen, underwent a preliminary toxicological evaluation, and is being brought to the Carcinogen Identification Committee for consultation. This is a compilation of the relevant studies identified during the preliminary toxicological evaluation.

### Epidemiological data

No cancer epidemiology studies were identified.

### Animal carcinogenicity data

- Long-term feeding studies
  - Two-year studies in male and female B6C3F<sub>1</sub> mice: NTP (1982); Dunnick *et al.* (1983)
  - Two-year studies in male and female F344 rats: NTP (1982); Dunnick *et al.* (1983)

### Other relevant data

- Genotoxicity
  - Transformation of BALB/C-3T3 cells: Matthews (1993)
  - *In vivo-in vitro* hepatocyte DNA repair assay in rats: unscheduled DNA synthesis and S-phase synthesis: Mirsalis *et al.* (1989)
  - Transformation of Syrian hamster embryo cells: Hatch *et al.* (1986)
  - Sex-linked recessive lethal assay and translocation test in *Drosophila melanogaster*: Yoon *et al.* (1985)

### Reviews

- IARC (1985, pp. 239-245)

## References<sup>1</sup>

- Dunnick JK, Huff JE, Haseman JK, Boorman GA (1983). Lesions of the urinary tract produced in Fischer 344 rats and B6C3F<sub>1</sub> mice after chronic administration of 11-aminoundecanoic acid. *Fundamental Applied Toxicology* **3**:614-618.
- Hatch GG, Anderson TM, Lubet RA, Kouri RE, Putman DL, Cameron JW, Nims RW, Most B, Spalding JW, Tennant RW, Schechtman LM (1986). Chemical enhancement of SA7 virus transformation of hamster embryo cells: Evaluation by interlaboratory testing of diverse chemicals. *Environ Mutagenesis* **8**:515-531.
- International Agency for Research on Cancer (IARC, 1985). *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Some Chemicals Used in Plastics and Elastomers*. Volume 39. IARC, Lyon, France
- Matthews EJ (1993). Transformation of BALB/v-3T3 cells: III Development of a co-culture clonal survival assay for quantification of chemical cytotoxicity in high-density cell cultures. *Environ Heal Persp Supplements* **101**(S2):311-318.
- Mirsalis JC, Tyson CK, Steinmetz KL, Loh EK, Hamilton CM, Bakke JP, Spalding JW (1989). Measurement of unscheduled DNA synthesis and S-phase synthesis in rodent hepatocytes following in vivo treatment: testing of 24 compounds. *Environ molecular mutagenesis* **14**:155-164.
- National Toxicology Program (NTP, 1982). *NTP Technical Report on the Toxicology and Carcinogenesis Studies of 11-aminoundecanoic acid (CAS No. 2432-99-2) in F344 Rats and B6C3F<sub>1</sub> Mice (Feed Study)*. NTP Technical Report 216. NIH Publication No. 82-1772. U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, Research Triangle Park, North Carolina and Bethesda, Maryland.
- Yoon JS, Mason JM, Valencia R, Woodruff RC, Zimmering S (1985). Chemical mutagenesis testing in *Drosophila*. IV. Results of 45 coded compounds tested for the National Toxicology Program. *Environ Mutagenesis* **7**:349-367.

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<sup>1</sup> Copies of these listed references, as either the abstract, the relevant sections of the publication, or the complete publication, have been provided to members of the Carcinogen Identification Committee. These references have been provided in the order in which they are discussed in this document.