

APPENDIX B

NTAN USE AND EXPOSURE INFORMATION

Use and Exposure Information for NTAN

1.0 Production Volume, Physical Form of Marketed Product and Use Pattern

Akzo Nobel Functional Chemicals LLC (AN FC LLC), has agreed to sponsor the substance NTAN, Acetonitrile, 2, 2', 2''-nitrilotris- (CAS# 7327-60-8), under the Extended HPV Program. NTAN is produced at one site. NTAN is a white damp cake with a melting point of 269° F/132° C (dry solid), an estimated boiling point of 321.24°C and estimated vapor pressure of 6.17×10^{-5} mmHg.

NTAN production volume meets or exceeds the HPV criteria of 1 million pounds.

In general, NTAN is used in an industrial setting as a chemical intermediate and is completely consumed in the manufacturing process of final products. The majority of NTAN is exported from the U.S. for use as a chemical intermediate. The balance remains in the U.S. for use as a chemical intermediate.

NTAN is not used in consumer products.

2.0 Environmental Exposure and Fate

2.1. Sources of Environmental Exposure

There is limited opportunity for environmental release during the manufacture of NTAN because closed systems are employed. A portion of the production volume is site limited using NTAN as a non-isolated chemical intermediate. The balance of the production volume is stored in supersacks and transported to customers in closed tank trailers/containers. The supersacks are loaded from and discharged directly into reactor vessels without direct contact by workers.

NTAN reaction waste-crystal liquor and equipment washings are disposed of by on-site deep well disposal and therefore, environmental releases, of waste containing NTAN, should be minimal. Empty supersacks are sent off site for hazardous disposal by customers. Based on the physical form of NTAN, little residue is expected to remain in the supersacks.

2.2. Transportation between Environmental Compartments

When distributed equally to air, water, and soil, NTAN is distributed 46% to water and 54% to soil based on the EPISuite Computer Model.

2.3 Biodegradation and Bioaccumulation

NTAN was predicted, by the EPISuite Computer Model, to not be readily biodegradable. However, environmental release is expected to be minimal as closed systems are employed during manufacture. Furthermore, NTAN is used as a chemical intermediate and is completely consumed in the manufacturing process of final products.

NTAN is not expected to bioaccumulate based on EPISuite Computer Model.

2.4 Stability in Water

Rate constants cannot be estimated for this structure.

2.5 Atmospheric Degradation

The half-life of NTAN, in the atmosphere, is estimated to be 25.924 hours by the EPISuite Computer Model indicating a moderate rate of degradation.

3.0 **Human Exposure**

3.1. Occupational Exposure

In an occupational setting, exposure to NTAN could occur during the following workplace situations:

<u>Task</u>	<u>Number of Workers</u>
• Charging reactor vessels	12
• Sampling for quality control	16
• Drumming or packaging	16
• Cleaning equipment	16

The primary routes of occupational exposures are through skin, eye and oral contact. However, there is limited opportunity for exposure during the manufacture of NTAN because closed systems are employed and supersacks are loaded from and discharged directly into reactor vessels without direct contact by workers. Good hygiene practices and use of personal protective equipment will also preclude exposure.

3.2 Consumer Exposure

NTAN is manufactured for use as a chemical intermediate and is totally consumed in the manufacture of the final product. Therefore, no exposure to the general public through the use of commercial or consumer products is expected.