



Product Safety Summary Sheet

DuPont™ N-Methyl-Pyrrolidone

Chemical Identification, Product Identification or Common Name:

CAS number: 872-50-4
CAS name: N-Methyl-Pyrrolidone (NMP)
EC Number: 212-828-1
IUPAC name: 1-methyl-2-pyrrolidone

Product Uses and Applications:

This chemical or product is generally used in the following manner:

- manufacture of bulk, large scale chemicals (including petroleum products),
- manufacture of fine chemicals,
- used as a laboratory reagent.

Physical Properties of the Chemical or Product:

N-Methyl-Pyrrolidone is a clear, colorless liquid with a boiling point of 204 °C and a melting/freezing point of -24.2 °C. NMP is non-explosive but is a combustible liquid with its flammability derived from its flash point of 91 °C. NMP has a self-ignition temperature of 245 °C.

Exposure Potential:

Workplace exposure:

NMP has a low acute toxicity by all relevant routes of exposure. Since it is possible to absorb NMP through the skin, appropriate gloves and personal protective equipment (PPE) are to be worn. However, due to the potential chronic toxicity, the substance is to be handled within a closed system and material transfers under containment or extract ventilation.

Workers should follow the recommended safety measures contained within the (Material) Safety Data Sheet ((M)SDS) and on any product packaging. Employees should be trained in the appropriate work processes and safety equipment to limit exposure to chemical substances. Occupational use of this substance is considered to be safe provided the recommended safety measures given in the (M)SDS are followed.

Consumer exposure:

The substance is used in industrial settings only. Therefore, no relevant consumer exposure is expected.

Environmental exposure:

NMP is readily biodegradable which implies that the substance will rapidly disappear from water and soil via mineralization and therefore will not likely pose a risk to drinking water. Exposure via food is not likely. The toxicological and ecotoxicological properties of this substance are of small concern regarding a hazard for humans via the indirect exposure route. Consequently all identified uses of the substance are assessed as safe for the environment. NMP is not bioaccumulative in aquatic or terrestrial environments. This also indicates that the substance is not persistent.

Health Information

Note: The information contained in this section may be useful to someone handling the pure undiluted substance such as a manufacturer or transporter. Consumers are not likely to come in contact with the pure substance. For more information on health hazards and recommended protective equipment, please refer to the (M)SDS.

Exposures may affect human health as follows:

Effect Assessment	Result
Acute Toxicity	Oral: Not acutely toxic. Inhalation: Causes respiratory tract irritation.
Irritation	Skin: May cause irritation with discomfort or pain, redness or rash, itching or swelling. The material may be absorbed through the skin. Eye: May cause irritation with discomfort, pain, redness or visual impairment.
Sensitization	Not a sensitizer.
Mutagenicity	Not a mutagen.
Carcinogenicity	Not a carcinogen.
Toxicity after repeated exposure	Inhalation: May cause respiratory system irritation.
Toxicity for reproduction	May cause harm to the unborn child.

Environmental Information

Note: The information in this chapter is intended to provide brief and general information of this substance's environmental impact. The results in the table below refer to testing performed with the non formulated, undiluted substance. The data does not replace the data given in the (M)SDS. For more information and recommended protective measures, please refer to the (M)SDS.

Effect Assessment	Result
Aquatic Toxicity	Acutely not harmful to fish, or freshwater and marine invertebrates or aquatic plants.
Biodegradability	Readily biodegradable.
Persistence	Not persistent.
Bioaccumulation potential	Not Bioaccumulative.

Risk Management

Workplace Management:

Risk management measures for industrial site use include containment through engineering controls and the use of personal protective equipment (PPE) as appropriate. Always refer to the (Material) Safety Data Sheet ((M)SDS) for guidance on the appropriate personal protective equipment to be used and on the safe handling of this material. Proper Local Exhaust Ventilation (LEV) should also be utilized.

Consumer Risk Management: Because NMP is used in closed industrial settings only, there is little risk of exposure to consumers.

Regulatory Information:

Always refer to the (Material) Safety Data Sheet ((M)SDS) for guidance on regulatory restrictions that may govern the manufacture, sale, transportation, use and/or disposal of this chemical or product. Regulations may vary by region, country, state, county, city, or local government.

First Aid Information:

For all First Aid or Emergency information, consult the (Material) Safety Data Sheet ((M)SDS).

Information Sources:

Data is compiled from a variety of sources, including publicly available documents, internal data and other sources such as, but not limited to, Chemical Safety Reports and (Material) Safety Data Sheets ((M)SDS).

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