

# Fact Sheet: N-Methylpyrrolidone (NMP)

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## **Q1. What is N-Methylpyrrolidone (NMP)?**

N-Methylpyrrolidone (NMP) is a solvent used in a variety of industries and applications, such as paint and coating removal, petrochemical processing, engineering plastics coatings, agricultural chemicals, electronic cleaning and industrial/domestic cleaning. NMP is produced and imported into the United States, with use estimated at over 184 million pounds per year. EPA estimates that approximately 9 percent of total NMP usage is for paint and coating removal products.

## **Q2. What uses of NMP did EPA evaluate?**

The final risk assessment for NMP evaluated health risks to consumers and workers using NMP in paint and coating removal products, as well as occupants in residences and the workplace where NMP paint and coating removers are used. Paint and coating removal products pose some of the highest exposures among the various uses of NMP.

## **Q3. What are the potential risks to people?**

The final risk assessment identified risks to people, particularly pregnant women and women of childbearing age, who have high exposure to NMP through paint or coating removal. Acute and chronic risks identified for people who use NMP for less than four hours per day may be reduced by use of specific types of chemical-resistant gloves. However, gloves and respirators do not adequately reduce risks to people who use NMP for more than four hours per day on a single day or repeatedly over a succession of days.

## **Q4. Did EPA evaluate risks to the environment in its assessment?**

NMP has a low hazard profile for ecological receptors and low persistence if released into aquatic or terrestrial environments. Therefore, EPA did not perform an evaluation of potential risks to the environment as part of this assessment.

## **Q5. What products containing NMP are available to consumers?**

Paint and coating removal products containing NMP are widely available in retail stores for purchase by consumers and workers.

**Q6. Are there specific names of products that contain NMP?**

Product names and ingredients change. Searching the Internet using the terms “N-Methylpyrrolidone”, “1-methyl-2-pyrrolidinone” or “NMP” and “paint and coating removal” produces results that include names of NMP-containing products.

**Q7. How do I know if NMP is an ingredient in a product?**

Generally, the product label identifies the ingredients in the product and should be read carefully. You can also consult the material safety data sheet (MSDS) or the product safety data sheet (PSDS) available from manufacturers. NMP can be referred to as N-Methylpyrrolidone or 1-methyl-2-pyrrolidinone and is sold under a variety of trade names. It is identified by its Chemical Abstract Number: 872-50-4.

**Q8. What advice does EPA have for consumers and workers to reduce exposure when NMP is used as a paint and coating remover?**

People using paint and coating removal products should follow the manufacturer’s instructions. In general, paint and coating removers containing NMP should be used outdoors. If work must be done indoors, you should ventilate the work area (e.g., with a fan and fresh air) to reduce exposure to NMP vapors. If the work must occur indoors under low ventilation conditions, you should consider having the work done professionally. Additionally, skin contact with NMP should be minimized by using NMP-resistant gloves to reduce exposure. Gloves made of butyl rubber or laminated polyethylene/EVOH are resistant to NMP.

**Q9. What action is EPA considering taking to address the health risks?**

A number of different options exist for mitigating risks from NMP, including transition to safer chemicals and greener processes/technologies, promotion of best practices, and phase out of uses. Implementing these approaches could involve regulatory action, voluntary approaches, or a mixture of both. EPA is considering a range of possible voluntary and regulatory actions to address risks from the use of NMP-containing paint and coating removers.

**Q10. Is EPA evaluating other paint and coating removers?**

In addition to this final risk assessment for NMP, in August 2014, EPA released the [final risk assessment for methylene chloride, also known as dichloromethane \(DCM\)](#), another chemical-based paint and coating remover. Because EPA has identified potential risks identified to those who may be exposed to NMP or methylene chloride containing paint and coating removers, EPA recommends taking measures to minimize exposure. For further information on paint and coating removers, see the U.S. Consumer Product Safety Commission publication “[What You Should Know About Using Paint Strippers.](#)”