

METHYL CYCLOPENTADIENE DIMER

This Product Safety Summary document is a high-level summary intended to provide the general public with an overview of product safety information on this chemical substance. It is not intended to provide emergency response, medical or treatment information, or to provide a discussion of all safety and health information. This document is not intended to replace the (Material) Safety Data Sheet. Warnings and handling precautions provided below are not intended to replace or supersede manufacturers' instructions and warning for their consumer products which may contain this chemical substance.

1. Chemical Identity

Methyl Cyclopentadiene Dimer (MCPD) is an olefin stream, generally manufactured from feedstocks that are of "petroleum" origin in a chemical plant as part of the ethylene manufacturing process.

<u>CAS No.</u>	<u>Chemical Name:</u>	<u>Other Names:</u>
26472-00-4	4,7-Methano-1H-Indene, 3A,4,7,7A-Tetrahydrodimethyl-	MCPD Methyl Cyclopentadiene Dimer

2. Product Uses

MCPD is primarily used as a feedstock to manufacture other industrial chemicals such as hydrocarbon resins. In addition, MCPD may be used to manufacture fuels and/or fuel additives.

3. Physical / Chemical Properties

MCPD is typically only handled in industrial facilities where safe conditions regarding ignition sources and ventilation are adequately controlled. At ambient temperature and pressure, MCPD is a flammable liquid. The flash point for MCPD is approximately 32°C.

4. Health Information

In an occupational setting, exposure to MCPD could occur through inhalation or by touch (dermal exposure). While MCPD product is of low acute toxicity by oral and dermal routes, it may be harmful by inhalation and irritating to the eyes and respiratory tract. If swallowed, small amounts of liquid may be aspirated into the lung and cause chemical pneumonitis or pulmonary edema. MCPD itself is not associated with any chronic or systemic health effects at exposures expected in the workplace.

5. Additional Hazard Information

Constituents:

Benzene (contains trace amounts). The following health hazard information is applicable to benzene: prolonged and repeated exposure to benzene may cause serious injury to the blood forming organs and is associated with anemia and to the later development of acute myelogenous leukemia.

Dicyclopentadiene (contains trace amounts). Studies of Dicyclopentadiene produced kidney effects observed in experimental animal studies with the effect believed to be specific to male rats only ("light hydrocarbon alpha 2u-globulin nephropathy") and are not considered relevant to human health.

6. Food Contact Regulated Uses

METHYL CYCLOPENTADIENE DIMER

This product is not claimed as compliant for food contact uses.

7. Environmental Information

In the environment, MCPD is very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. However, once it enters the aquatic or terrestrial habitats, it is expected to rapidly evaporate. In the air, MCPD has the potential to degrade rapidly through physical processes. Because the tendency of MCPD is to migrate from water and soil to air, residual concentrations in aquatic and terrestrial habitats will be short lived and chronic toxicity is not expected.

8. Exposure Potential

- **Workplace exposure** – This refers to potential exposure to MCPD in a manufacturing facility or industrial workplace. Generally, exposure of personnel to MCPD in manufacturing facilities is relatively low because the process, storage and handling operations are closed, with little potential for releases to the air. ExxonMobil recommends limiting occupational exposure to no more than 3 parts per million (ppm) as a time-weighted average over an 8-hour work day. Since MCPD is used in a closed process, exposures are unlikely to approach these levels.
- **Consumer use of products containing MCPD** – MCPD is not sold to the general public. Exposure to consumers would be expected to be negligible, far below the recommended occupational exposure level described above.
- **Environmental releases** – Chemical manufacturers are committed to operating in an environmentally responsible manner everywhere we do business. Our efforts are guided by in-depth scientific understanding of the environmental impact of our operations, as well as by the social and economic needs of the communities in which we operate. Industrial spills or releases are rare; however a spill or release may pose a significant flammability issue. Our operational improvement targets and plans are based on driving incidents with real environmental impact to zero and delivering superior environmental performance.

9. Manufacture of Product

- **Capacity** – There is no publicly available data on MCPD production capacity.
- **Process** – MCPD is manufactured as part of ethylene production processes in chemical plants.

10. Risk Management

- **Workplace Risk Management** - When using this product, avoid breathing vapors from the material and make sure that there is adequate ventilation. Use non-sparking tools and explosion-proof equipment. Always use chemical resistant gloves to protect your hands and skin and always wear eye protection such as chemical goggles. Do not eat, drink, or smoke where chemicals are handled, processed, or stored. Wash hands and skin following contact. If this product gets into your eyes, flush eyes thoroughly with tap water. If irritation occurs, get medical assistance. Please refer to the (Material) Safety Data Sheet.
- **Consumer Risk Management** – This product is not sold directly to the public for general consumer uses. If exposure should occur, it is expected to be infrequent and of short duration. Always follow manufacturers' instructions, warnings and handling precautions when using their products. The best way to minimize exposure to vapors is to work in well-ventilated areas.

Product Safety Summary



METHYL CYCLOPENTADIENE DIMER

11. Federal/Science Agency Resources (For CAS No. searches, enter 26472-00-4)

Organization for Economic Cooperation and Development (OECD) - ChemPortal web-based search tool

- <http://webnet3.oecd.org/echemportal/>

European Chemical Agency (ECHA)

- <http://apps.echa.europa.eu/registered/registered-sub.aspx>

U.S. Environmental Protection Agency - High Production Volume Information System (HPVIS)

- <http://www.epa.gov/hpv/hpvis/index.html>

12. Regulatory Information

Regulations may exist that govern the manufacture, sale, transportation, use and/or disposal of this product and may vary by city, state, country or geographic region. Additional helpful information may be found by consulting the relevant ExxonMobil (Material) Safety Data Sheet at:

- <http://www.msds.exxonmobil.com/psims/psims.aspx?brand=xomcc>

13. Conclusion Statements

MCPD ...

- is an industrial chemical used to make other industrial chemicals. It is not sold to the general public.
- itself is generally considered to have low toxicity to health however it may contain trace amounts of benzene which is classified as a human carcinogen.
- is not expected to cause adverse environmental effects at levels typically found in the workplace or environment.
- is flammable; use in closed systems, and only with good ventilation and avoid all ignition sources.

©2012 Exxon Mobil Corporation. The information and recommendations contained herein are, to the best of ExxonMobil's knowledge and belief, accurate and reliable as of the date issued. You can contact ExxonMobil to insure that this document is the most current available from ExxonMobil. Users of chemical products should refer to the product labels and applicable Material Safety Data Sheets for information and recommendations as to the safe handling and use of this product. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted. The term, "ExxonMobil" is used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates in which they directly or indirectly hold any interest. ExxonMobil, the ExxonMobil Logo and the "Interlocking X" Device, and product names used herein are trademarks or registered trademarks of Exxon Mobil Corporation and/or its affiliates, unless otherwise noted.