

Product Safety Summary



ETHANE

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

Ethane is a hydrocarbon gas, generally manufactured from feedstocks that are of "petroleum" origin in a refinery or chemical plant manufacturing process. It generally is manufactured by separation from natural gas.

<u>CAS No.</u>	<u>Chemical Name:</u>	<u>Other Names:</u>
74-84-0	Ethane	Methylmethane, Ethyl Hydride

2. Product Uses

Ethane is used as a feedstock to manufacture ethylene. It also can be used as a fuel and may be a component in LPG (Liquefied Petroleum Gas).

3. Physical / Chemical Properties

At ambient temperature and pressure, ethane is an extremely flammable gas. Under slightly increased pressures, ethane can be readily liquified and stored under pressure. Large quantities are typically handled only in industrial facilities where safe conditions regarding ignition sources and ventilation are adequately controlled.

The flash point for ethane is approximately -150°C.

4. Health Information

Ethane is a gas at ambient temperature and pressure. Thus, exposure to ethane during manufacturing and use would most likely occur through inhalation. Ethane is of low acute toxicity at levels typically found in the workplace or environment. At extremely high concentrations, well above recommended occupational exposure levels, ethane may cause drowsiness and lightheadedness. If ethane has been liquefied (compressed), direct contact could result in frostbite-like burns to skin and/or eyes.

5. Additional Hazard Information

Exposure to high levels of ethane vapors can result in asphyxia (suffocation); it reduces the availability of oxygen in the breathing air. Inhalation of high levels can lead to nausea.

6. Food Contact Regulated Uses

Ethane is not claimed as compliant for food contact uses.

7. Environmental Information

ETHANE

If released to the environment, ethane will partition to air. Once in the air, it will degrade at a moderate rate by physical processes. Because the tendency of ethane is to move from water to air, water contamination and chronic aquatic toxicity are not expected. Considerable measures are taken to prevent releases from manufacturing and use activities.

8. Exposure Potential

- **Workplace exposure** – This term refers to the potential for worker exposure in a manufacturing facility or industrial workplace. Generally, exposure of workplace personnel to ethane in manufacturing facilities is relatively low because the process, storage and handling operations are in closed systems, with little potential for releases to the air. The American Conference of Government Industrial Hygienists recommends limiting occupational exposure to no more than 1000 parts per million (ppm) per an 8-hour work day.
- **Consumer use of products containing ethane** – Ethane is not sold to the general public. Exposure to consumers would be expected to be low, far below the recommended occupational exposure level described above.
- **Environmental releases** – As a chemical manufacturer, we 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** – According to publicly available data, more than 1 billion pounds of ethane was manufactured in the US in 2005 (the most recent reporting year available).
- **Process** – Ethane is generally manufactured by separation from a petrochemical gas mixture in a refinery or chemical plant.

10. Risk Management

- **Workplace Risk Management** – When using this chemical, make sure that there is adequate ventilation. If controls do not maintain air concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. 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 this chemical is handled, processed, or stored. Wash hands and skin following contact. If this chemical gets into your eyes, rinse eyes thoroughly for at least 15 minutes with tap water and seek medical attention. Please refer to the Safety Data Sheet for additional information on handling and exposure considerations.
- **Consumer Risk Management** - Ethane manufactured by ExxonMobil is not sold directly to the public for general consumer uses. As a result of its use in industrial chemical reactions, consumer exposure is highly unlikely. 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 prevent exposure to vapors is to work in well-ventilated areas.

Product Safety Summary



ETHANE

11. Regulatory Information

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

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

12 Conclusion Statements

- Ethane is chemical used to manufacture ethylene. It is sold to industrial customers.
- Ethane is not expected to cause adverse environmental effects at levels typically found in the workplace or environment.
- Ethane is extremely flammable; use in closed systems with good ventilation, avoiding all ignition sources.

©2013 ExxonMobil. 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.