

m-Toluidine

This document provides a brief description of m-Toluidine, its uses, and the potential hazards associated with short and long term exposure. Environmental impact information for accidental releases is included. This information is general in nature and is not intended as a replacement for the safety data sheet (SDS), product label and other safe handling literature. For additional information consult the LANXESS Corporation safety data sheet.

Identification

Product Name:	m-Toluidine distilled
Chemical Name:	m-Toluidine
Synonym(s):	1-Aminophenylmethane 3-Amino-1-methylbenzene 3-Aminotoluene 3-Methylaniline Benzenamine, 3-methyl
CAS Number:	108-44-1

Description

Overview:	m-Toluidine is a colorless to light yellow liquid at ambient temperatures. The chemical has a characteristic amine-like odor.
Uses:	m-Toluidine is sold by LANXESS for use as an intermediate in the production of dyes and pigments. The chemical is also used as an intermediate in the production of photographic agents.
Properties:	Boiling Point: 203 – 204°C (397.4 – 399.2°F) Melting Point: -31°C (-23.8°F) Flash Point: 85°C (185°F) closed cup Solubility in Water: Soluble

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture, at bulk unloading, storage and staging areas and during sampling and reactor vessel charging operations in facilities where the chemical is used as an intermediate in the manufacture of other products. A much lower potential for exposure exists in facilities using m-Toluidine in closed manufacturing processes by trained personnel.

Employee Training

Workers handling m-Toluidine should be trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. An appropriate respirator must be worn based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. A NIOSH approved air-purifying respirator with organic vapor cartridges and particulate pre-filter can be used to minimize exposure. In addition, LANXESS recommends that safety glasses with side shields, permeation resistant gloves, clothing and foot protection be worn when handling m-Toluidine. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used.

Consumer Exposure

LANXESS Corporation does not sell m-Toluidine to the general public.

Short-Term Health Effects

m-Toluidine is readily absorbed through the skin and eyes. Skin contact may be irritating with symptoms of redness. m-Toluidine may be irritating to eyes with symptoms of redness and pain. Sensitization may occur. Symptoms of ingestion may include abdominal pain, nausea, vomiting and diarrhea. Inhalation, ingestion or adsorption of m-Toluidine in sufficient quantities may cause central nervous system depression (with symptoms of nausea, vomiting, headache, drowsiness/fatigue, dizziness/vertigo and unconsciousness) and/or methemoglobinemia, a temporary condition that reduces the ability of blood to carry oxygen (symptoms of methemoglobin formation may include cyanosis, a purplish-blue coloring of the skin, fingernails and lips).

Long-Term Health Effects

Prolonged or repeated exposure to m-Toluidine may result in damage to the blood system or kidneys. Once sensitized, an allergic skin reaction may occur when subsequently exposed to very low levels of m-Toluidine. May cause cancer.

Physical Hazards

m-Toluidine is stable under normal conditions of use. Avoid contact with oxidizing agents and strong acids. m-Toluidine is flammable. Explosive vapor/air mixtures may form at temperatures above 85°C (185°F). Containers may burst if heated or pressurized. Heating to decomposition may release carbon monoxide, carbon dioxide, nitrogen oxides and other potentially toxic fumes or gases. Avoid heat, open flames and other potential sources of ignition.

Potential Environmental Impact

m-Toluidine is not readily biodegradable. An accidental release to the atmosphere will degrade rapidly in the presence of sunlight. A release to water may pose a danger to fish (high toxicity), invertebrates (high toxicity) and aquatic plants (high toxicity) prior to degradation. m-Toluidine may persist in water and may adsorb to suspended soils and sediments, but is not expected to accumulate in the tissues of aquatic organisms.

Conclusion

Under normal conditions of anticipated use as described in this Product Safety Assessment, and if the recommended safe use and handling procedures are followed, m-Toluidine is not expected to pose a significant risk to human health or the environment.

References

International Chemical Safety Card, meta-TOLUIDINE, International Programme on Chemical Safety (IPCS)

Safety Data Sheet (SDS), m-Toluidine distilled, LANXESS Corporation

MedlinePlus Medical Encyclopedia, U.S. National Library of Medicine and the National Institutes of Health

SIDS Initial Assessment Report – m-Toluidine, Organization for Economic Cooperation and Development (OECD)

ToxNet Hazardous Substance Data Bank, U.S. National Library of Medicine, National Institutes of Health and the U.S. Department of Health and Human Services

Contact Information

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Notices

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