



Cal/OSHA, DOT HAZMAT, EEOC, EPA, HAZWOPER, HIPAA, IATA, IMDG, TDG, MSHA, OSHA, and Canada OHS Regulations and Safety Online Training

Since 2008

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Right to Know Hazardous Substance Fact Sheet

Common Name: **BENZENE**

Synonyms: Benzin; Benzol; Phenyl Hydride

Chemical Name: Benzene

Date: October 2008 Revision: July 2015

Description and Use

Benzene is a clear, colorless liquid with a sweet *Petroleum*-like odor. It is used as a solvent and in making plastics, resins, dyes and pesticides. It is also found in *Gasoline*.

- **ODOR THRESHOLD= 12 ppm**
- Odor thresholds vary greatly. Do not rely on odor alone to determine potentially hazardous exposures.

Reasons for Citation

- **Benzene** is on the Right to Know Hazardous Substance List because it is cited by OSHA, ACGIH, DOT, NIOSH, NTP, DEP, IARC, NFPA and EPA.
- This chemical is on the Special Health Hazard Substance List.

[SEE GLOSSARY ON PAGE 5.](#)

FIRST AID

Eye Contact

- Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids. Remove contact lenses, if worn, while rinsing.

Skin Contact

- Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

Inhalation

- Remove the person from exposure
- Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
- Transfer promptly to a medical facility.

EMERGENCY NUMBERS

Poison Control: 1-800-222-1222

CHEMTREC: 1-800-424-9300

NJDEP Hotline: 1-877-927-6337

National Response Center: 1-800-424-8802

CAS Number: 71-43-2

RTK Substance Number: 0197

DOT Number: UN 1114

EMERGENCY RESPONDERS >>> SEE BACK PAGE

Hazard Summary

Hazard Rating	NJDHSS	NFPA
HEALTH	4	2
FLAMMABILITY	-	3
REACTIVITY	-	0

CARCINOGEN

FLAMMABLE

POISONOUS GASES ARE PRODUCED IN FIRE
CONTAINERS MAY EXPLODE IN FIRE

*Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious;
4=severe*

- **Benzene** can affect you when inhaled and by passing through the skin.
- **Benzene** is a CARCINOGEN and MUTAGEN. HANDLE WITH EXTREME CAUTION.
- **Benzene** can irritate the skin and eyes with drying and scaling of the skin.
- Inhaling **Benzene** can irritate the nose and throat.
- **Benzene** can cause headache, dizziness, nausea and vomiting. Convulsions and coma, or sudden death from irregular heartbeat, may follow high exposure.
- Repeated exposure can cause damage to the blood cells (aplastic anemia).
- **Benzene** is a FLAMMABLE LIQUID and a DANGEROUS FIRE HAZARD.

Workplace Exposure Limits

OSHA: The legal airborne permissible exposure limit (PEL) is **1 ppm** averaged over an 8-hour workshift and **5 ppm**, not to be exceeded during any 15-minute work period.

NIOSH: The recommended airborne exposure limit (REL) is **0.1 ppm** averaged over a 10-hour workshift and **1 ppm**, not to be exceeded during any 15-minute work period.

ACGIH: The threshold limit value (TLV) is **0.5 ppm** averaged over an 8-hour workshift and **2.5 ppm** as a STEL (short-term exposure limit).

- **Benzene** is a CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.
- The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.