



GASOLINE

What is GASOLINE?

Gasoline is an extremely flammable fuel source for automobiles and other vehicles and equipment. A liquid, it can be colorless, pale brown or pale pink.

Gasoline is produced by refining petroleum, and it consists of a complex mixture of over 150 chemicals. The actual make-up of these chemicals varies by petroleum source, manufacturer, and even the time of year. Primary chemicals are benzene, toluene, ethylbenzene, xylenes; and oxygenates, including methyl tert-butyl ether (MTBE).

How can people be exposed to gasoline?

While gasoline is typically in liquid form, both liquid and vapors can enter the environment as it is manufactured, transported, transferred, pumped into a car's tank, or accidentally spilled. People most commonly are exposed to gasoline when they inhale vapors as they refuel vehicles and equipment.

Pumping gasoline after the automatic pump shut-off engages ('topping off' the tank) can overfill the tank, leading to spills that contaminate the ground and expose the person at the pump to liquid and vapors. Gasoline spills can contaminate soil and groundwater.

How can gasoline affect my health?

Breathing – Inhaling gasoline and its components causes burning of the nose and throat, headache and dizziness. Inhaling higher concentrations can lead to more serious effects, including coma and difficulty breathing. In addition, exposure to very high air concentrations can be deadly.

Ingesting - Ingesting gasoline can irritate the stomach and can be fatal if swallowed in sufficient amounts.

Skin Contact - Spilling gasoline on the skin or clothing can cause irritation.

Some chemicals in gasoline are human carcinogens. Because of this, the EPA considers gasoline a possible human carcinogen.

Recommendations:

Reduce exposure to gasoline and its components by using common sense:

- Never "top off" your car's tank when fueling. The result can be an overspill, resulting in exposure to vapors and contaminating the ground. "Topping off" also wastes fuel. The Stage II Vapor Recovery system designed into the gasoline pump includes an auto-shutoff. Feathering the pump to add additional fuel pumps gasoline into the vapor recovery system, not into your vehicle.
- Allow lawnmowers and other gas-powered equipment to cool before refueling. Refueling a hot machine can increase the amount of released gasoline vapors.
- Never refuel equipment with the engine running, as this could ignite gasoline liquid or vapors and cause a fire or explosion.

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Recommendations (continued):

- Always store and transport gasoline in approved containers. Consider using newer containers with built-in safety features.
- Never store gasoline inside your home.
- Always refuel cars and equipment in well-ventilated areas to prevent buildup of gasoline vapors.
- Seal storage vessels tightly by capping and closing vents. Be sure to leave room in storage containers for expansion. This will limit the amount of vapors released into the surrounding air.
- Never store gasoline near an open flame or heat source, as the vapors can ignite or explode.

Regulations:

- The Delaware Department of Natural Resources and Environmental Control (DNREC) requires the reporting of all gasoline spills greater than 25 gallons.
- American Conference of Governmental Industrial Hygienists suggests a health and safety guidance level not to exceed 300 parts per million (time-weighted average, in air).

Technical Information for gasoline

CAS Number: 8006-61-9

Chemical Formula: NA

Carcinogenicity (IARC): Group A – known to be a human carcinogen (benzene)

MCL (Drinking Water): 5 ppb (Benzene)

Common Names: Gasoline, motor fuel, petrol

Common Uses: Automotive fuel

References:

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