



FACT SHEET

Pentane, All Isomers

**CAS Numbers: n-Pentane: 109-66-0;
Isopentane: 78-78-4; Neopentane: 463-82-1**

This fact sheet provides a summary of the Development Support Document (DSD) created by the TCEQ Toxicology Division (TD) for the development of Regulatory Guidelines (ESLs, AMCVs and ReVs) for ambient exposure to this chemical. For more detailed information, please see the DSD or contact the TD by phone (1-877-992-8370) or e-mail (tox@tceq.texas.gov).

What is pentane?

Pentane is a colorless, volatile and flammable liquid with a sweet or gasoline-like odor. Pentane consists of three isomers: n-pentane, isopentane, and neopentane. n-Pentane is an ingredient of crude oil and a component of the condensate from natural gas production. It is primarily obtained from the processing of crude oil. n-Pentane is used as a component of gasoline blends, as an aerosol propellant, as a blowing agent for foams, and as a solvent. Isopentane is also used as a blowing agent, and neopentane is used in the manufacture of butyl rubber.

How is pentane released into ambient air?

Pentane can be released into the air from industrial uses or production plants and from natural gas production. It is also released to the environment during its use in adhesives and glues. Pentane released to the environment is expected to volatilize to the atmosphere, where it will undergo photochemical oxidation reactions.

How can pentane affect my health?

Permitted levels of pentane should not cause adverse health and welfare effects. Pentane produces minor lung irritation. Based on animal studies, inhalation of extremely high concentrations of pentane (i.e., concentrations above the lower explosive limit of 14,000 ppm) may affect the nervous system or cause irritation of the nose and throat. There are no human or animal studies indicating pentane has a potential to be a human carcinogen.

Is pentane odorous or harmful to plants?

Pentane has a sweet or gasoline-like odor at moderate levels. No odor threshold value for neopentane was reported. Pentane has not been shown to have an adverse effect on plants.

Why does the TCEQ set Regulatory Guidelines for pentane?

The TCEQ has set various air quality guideline levels (ESLs, AMCVs and ReVs) to protect human health and welfare. Please Definitions of ESLs, ReVs, and AMCVs located on the TCEQ



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DSD webpage for more information. The air quality guideline levels for pentane have been designed to protect the general public from short-term and long-term adverse health and welfare effects. The general public includes sensitive populations such as children, the elderly, pregnant women and people with preexisting health conditions. If you would like to know more about the specific ESLs, AMCVs and ReVs developed, what the values are and what they are used for, please see the DSD.