



FACT SHEET

Pentene, All Isomers

CAS #: 1-Pentene: 109-67-1
2-Pentene: 627-20-3, 646-04-8

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

What is pentene?

1-Pentene is a colorless liquid with a highly disagreeable odor. 1-Pentene is used as a blending agent for high octane motor fuel and in pesticide formulations. 1-Pentene is also known as α -amylene, 1-pentalyene, and propylethylene. 2-Pentene is a colorless liquid that is used to inhibit polymerization. 2-Pentene occurs as two isoforms, cis-2-pentene and trans-2-pentene. 2-Pentene is also known as β -amylene.

How is pentene released into ambient air?

1-Pentene is released into the air in exhaust from machines that use high octane motor fuel. 2-Pentene may be released into the air by companies using polymerization to make their products.

How can pentene affect my health?

Permitted levels of 1- and 2-pentene should not cause adverse health and welfare effects. Very few studies are available for short-term adverse health effects following inhalation of 1- and 2-pentene, because they are relatively non-toxic. Therefore, the TS developed a generic short-term ESL. A generic ESL uses a calculated ratio to estimate a level at which no significant adverse health effects would occur. For more information on the Tier II Generic ESL approach, please see the ESL Guidelines. The TS did not find any long-term 1-, and 2-pentene studies in humans or laboratory animals. 1- and 2-Pentene have not been classified as a human carcinogen by the TCEQ, the United States Environmental Protection Agency, the National Toxicology Program, or the International Agency for Research on Cancer.

Is pentene odorous or harmful to plants?

1-Pentene has an unpleasant odor at moderate concentrations. The TS did not identify any studies describing potential damage from 1-pentene in plants. The TS did not find any studies that describe the odor of 2-pentene or potential harmful effects in plants.

Why does the TCEQ set Regulatory Guidelines for pentene?

The TCEQ has set various air quality guideline levels (ESLs and ReVs) to protect human health



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and welfare. Please see Definitions of ESLs, ReVs, and AMCVs located on the TCEQ DSD webpage for more information. The ESLs for 1- and 2-pentene are set to protect the general public from short-term and long-term adverse health and welfare effects. The general public includes children, the elderly, pregnant women, and people with preexisting health conditions. If you would like to know more about the specific ESLs and ReVs developed, what the values are, and what they are used for, please see the DSD.