



FACT SHEET

2-BUTENE (CIS AND TRANS) CAS #: 107-01-7

CIS-2-BUTENE CAS #: 590-18-1

TRANS-2-BUTENE CAS #: 624-64-6

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.state.tx.us).

What are cis-2-butene and trans-2-butene?

Cis-2- and trans-2-butene are chemical isomers that are flammable, colorless gases with a “gas-house” odor. They frequently occur together as a mixture and are referred to as 2-butene. Cis-2- and trans-2-butene are used as solvents and cross-linking agents. They are used in the synthesis of or as a chemical intermediate of other chemicals. They are a component of liquefied petroleum gas. Cis-2-butene is also known as cis-2-butylene, cis- β -butylene, and cis-1,2-dimethylethylene. Trans-2-butene is also known as trans-2-butylene, trans- β -butylene, and trans-1,2-dimethylethylene.

How is 2-butene released into ambient air?

2-Butene is released into ambient air from a variety of sources. Trace levels of butenes can be identified in urban and suburban air arising from combustion of fossil fuels and losses from gas plants and refineries.

How can 2-butene affect my health?

Permitted levels of 2-butene should not cause adverse health and welfare effects. Laboratory animal studies indicate the main effects 2-butene produces are loss in body weight and anesthesia at higher concentrations. 2-Butene is relatively nontoxic. The TS did not find any long-term 2-butene studies in humans or laboratory animals. There are no human or animal studies indicating 2-butene has potential to be a human carcinogen. As a result, 2-butene has not been evaluated for its potential to be a human carcinogen by the TCEQ, the United States Environmental Protection Agency, the National Toxicology Program, and the International Agency for Research on Cancer.

Is 2-butene odorous or harmful to plants?

2-Butene has a “gas-house” odor at moderate concentrations. 2-Butene has not been shown to have an adverse effect on plants.

Why does the TCEQ set Regulatory Guidelines for 2-butene?

The TCEQ has set various air quality guideline levels (ESLs and ReVs) to protect human health and welfare. Please see the [Regulatory Guideline Fact Sheet](#) for more information on ESLs and ReVs. The ESLs for 2-butene 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



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specific ESLs and ReVs developed, what the values are, and what they are used for, please see the [DSD](#).