FACT SHEET

tert-butyl alcohol

CAS Number: 75-65-0

This fact sheet provides a summary of the Development Support Document (DSD) created by the TCEQ Toxicology, Risk Assessment, and Research Division (TRARD) for the development of Regulatory Guidelines (effects screening levels [ESLs], air monitoring comparison values [AMCVs], and reference values [ReVs]) for ambient air exposure to this chemical. For more detailed information, please see the DSD or contact the TRARD by phone (1-877-992-8370) or e-mail (tox@tceq.texas.gov).

What is *tert*-butyl alcohol?

Tert-butyl alcohol (TBA), also known as *t*-butanol, is a white crystalline solid or colorless, highly flammable liquid (above 25.7°C) with a camphor-like odor. TBA has been used for a variety of purposes, including (but not limited to) as a fuel oxygenate, an octane booster in unleaded gasoline, a denaturant for ethanol, a dehydrating agent and solvent, and to manufacture methyl methacrylate plastics, food flavoring, artificial musk, fruit essences, and perfume.

How is TBA released into ambient air?

The general population may be exposed to TBA through breathing ambient air containing TBA. The US Environmental Protection Agency's Toxics Release Inventory program reported that in 2014, for example, more than 1.8 million pounds of TBA was released into the air and other environmental media (e.g., water bodies, land, underground injection wells).

How can TBA affect my health?

Permitted levels of TBA should not cause adverse health effects. Laboratory animals exposed to extremely high air concentrations of TBA over multiple days were observed to experience central nervous system depression effects (i.e., poor muscle control, hyperactivity, hypoactivity). When exposed to high air concentrations over the long term, laboratory animals experienced kidney effects such as inflammation and increased kidney weight. Currently, although there is suggestive evidence of the carcinogenic potential of TBA, no data are available to indicate that TBA is carcinogenic to humans or likely to be carcinogenic to humans.

Why does the TCEQ set Regulatory Guidelines for TBA?

The TCEQ sets various air quality guideline levels (ESLs, AMCVs, and ReVs) to protect human health and welfare. Please see Definitions of ESLs, ReVs, and AMCVs located on the TCEQ final DSD webpage for more information. The TCEQ air quality guideline levels (e.g., acute and chronic ReVs and ESLs) for TBA have been designed to protect the general public (including sensitive populations such as children, the elderly, pregnant women, and people with preexisting health conditions) from the potential adverse health effects of TBA exposure. If you

would like to know more about the specific ESLs, AMCVs and ReVs developed for TBA, what the values are, and what they are used for, please consult the TBA DSD.