



FACT SHEET

Trimethylbenzenes

CAS #:

526-73-6 (1,2,3-TMB)

95-63-6 (1,2,4-TMB)

108-67-8 (1,3,5-TMB)

25551-13-7 (Mixed Isomers)

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.state.tx.us).

What are Trimethylbenzenes (TMBs)?

Trimethylbenzenes (TMBs) are commercially available substances that can be a mixture of three isomers (i.e., different structures of the same compound): 1,2,3-TMB or hemimellitene; 1,2,4-TMB or pseudocumene; and 1,3,5-TMB or mesitylene. Production of TMB isomers occurs during petroleum refining, and 1,2,4-TMB individually makes up approximately 40% of aromatic hydrocarbons with nine carbons (C₉ aromatic fraction). The C₉ fraction is widely used as a component of gasoline. Other uses of TMBs include use as: solvents in research and industry, a dyestuff intermediate, paint thinner, and a UV oxidation stabilizer for plastics.

How are TMBs released into ambient air?

TMBs may be released into the ambient air by industries that make or use it, as well as from vehicle emissions, which are a major anthropogenic source of TMBs.

How can TMBs affect my health?

Permitted levels of TMBs should not cause short- or long-term adverse health or welfare effects. Animal inhalation studies of TMBs indicate that central nervous system effects, which include decreased pain sensitivity and decreased neuromuscular function and coordination, appear to be the most sensitive effects of short-term exposure to sufficiently high concentrations. Permitted levels protect the public (including potentially sensitive subpopulations) against adverse health effects of TMBs, including the most sensitive effects. Data are inadequate to assess the carcinogenic potential of TMBs in humans via inhalation.

Are TMBs odorous to humans or harmful to plants?

TMBs have a strong, pleasant aromatic odor; there were no data found on any adverse effects of TMBs on vegetation.



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Why does the TCEQ set Regulatory Guidelines for TMB?

The TCEQ has set various air quality guideline levels (ESLs, AMCVs and ReVs) to protect human health and welfare. Please see the Definitions of ESLs, ReVs, and AMCVs located on the TCEQ DSD webpage for more information. The air quality guideline levels for TMBs have been designed 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, AMCVs and ReVs developed, what the values are and what they are used for, please see the DSD.