FACT SHEET

Ethylene Dibromide

CAS Registry Number: 106-93-4

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 ethylene dibromide (EDB)?

EDB is mainly a synthetic chemical; however, it is also formed naturally by microalgae growth found in small amounts in the ocean. Until 1978, EDB was primarily used as a lead scavenger in antiknock mixtures added to gasoline. EDB was also used as a pesticide, chemical intermediate to the production of resins, gums, waxes and dyes, pharmaceuticals, and has also been used as a flame retardant. In 1984, the Environmental Protection Agency (EPA) eliminated most uses of EDB in the United States. Another name for EDB is 1,2-dibromoethane.

How is EDB released into ambient air?

EDB may be released into the environment from manufacturing use and emissions at waste sites. EDB is persistent in the environment, especially in groundwater, and breaks down slowly in air and surface water.

How can EDB affect my health?

Permitted levels of EDB should not cause adverse health or welfare effects. Laboratory animal studies indicate that breathing significantly high levels of EDB for a sufficient duration can cause damage to the lining of the nasal cavity and cause fetal and maternal toxicity. Laboratory animal studies also indicate that breathing significantly elevated levels for a sufficient amount of time can lead to more serious effects such as respiratory, liver, kidney, and testicular toxicity, and could increase the risk of certain tumors (e.g., nasal cavity tumors).

Is EDB odorous to humans or harmful to plants?

EDB has been described as having a sweet, chloroform-like odor. Adverse effects to plants from EDB in the ambient air have not been documented.

Why does the TCEQ set Regulatory Guidelines for EDB?

The TCEQ has set 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 DSD webpage for more information. The air quality guideline levels for EDB 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.