FACT SHEET

Propionaldehyde

CAS Number: 123-38-6

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 propionaldehyde?

Propionaldehyde is used primarily in the manufacture of propanol, propionic acid, polyvinys and other plastics, fragrances and fungicides. It has been approved as a synthetic flavoring ingredient for direct addition to food. Other names for propionaldehyde include methylacetaldehyde, propanal, propionic aldehyde, propyl aldehyde

How is propionaldehyde released into ambient air?

Exposure to propionaldehyde in ambient air may occur as a result of its release from manufacturing facilities, municipal waste incinerators, and from combustion of wood, gasoline, diesel fuel, and polyethylene. Propionaldehyde has also been detected in tobacco smoke.

How can propionaldehyde affect my health?

Permitted levels of propionaldehyde should not cause short- or long-term health effects. After short-term exposure, propionaldehyde may irritate the nose at moderate concentrations, and exposure to significantly high levels of propionaldehye may cause eye and lung irritation. Long-term exposure to propionaldehyde may also lead to more serious respiratory irritation as well as damage to the lining of the nose and lung. Propionaldehyde has not been classified as a human carcinogen by the TCEQ or the United States Environmental Protection Agency. Permitted levels protect the public (including potentially sensitive subpopulations) against all adverse health effects of propionaldehyde, including the most sensitive effects.

Is propionaldehyde odorous to humans or harmful to plants?

Propionaldehyde has been described as having a pleasant, sweet odor at low concentrations but suffocating, pungent odor at higher concentrations. Adverse effects to plants from propionaldehyde in the ambient air have not been described.

Why does the TCEQ set Regulatory Guidelines for propionaldehyde?

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 propionaldehyde

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.