FACT SHEET

ACROLEIN

CAS #: 107-02-8

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 Toxicology Division by phone (1-877-992-8370) or e-mail (tox@tceq.texas.gov).

What is acrolein?

Acrolein is a widespread pollutant that is used in the production of chemicals. It is also used as an herbicide in irrigation canals and as a biocide. Humans are exposed to acrolein primarily through tobacco smoke, gasoline and diesel exhaust from cars and trucks, structural and forest fires, and partially combusted animal fats and vegetable oils. Acrolein is a clear or yellow liquid with a piercing, disagreeable odor. Synonyms for acrolein include acrylaldehyde, acrylic aldehyde, and 2-propenal.

How is acrolein released into ambient air?

Acrolein may be released into the air from fires, chemical manufacturing, and from automobile and truck exhaust. It is also found in cigarette smoke.

How can acrolein affect my health?

Permitted levels of acrolein should not cause adverse health and welfare effects. Well-conducted human studies demonstrate acrolein causes mild sensory irritation of the eyes, nose, and throat and decreased respiratory rate at low concentrations. Longer-term animal studies showed sensory irritation as well as mild damage to nasal tissue following exposure to acrolein. Acrolein has not been classified as causing cancer by the United States Environmental Protection Agency.

Is acrolein odorous or harmful to plants?

Acrolein is very odorous at low concentrations with a piercing, disagreeable, and 'acrid' odor. It is used in liquid form as a restricted-use herbicide and biocide, thus it is harmful to plants. Acrolein in air may produce leaf damage to plants at high concentrations.

Why does the TCEQ set Regulatory Guidelines for acrolein?

The TCEQ has set various air quality guideline concentrations (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 concentrations for acrolein 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 pre-existing 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.