FACT SHEET

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (TPM, Texanol™, NX 795, or UCAR™ Filmer IBT)

CAS #: 25265-77-4

This fact sheet provides a summary of the Development Support Document (DSD) created by the Toxicology Section (TS) of the Texas Commission on Environmental Quality (TCEQ) for the development of Regulatory Guidelines (ESL and ReVs) for ambient exposure to this chemical. For more detailed information, please see the DSD or contact the TS by phone (1-877-992-8370) or e-mail (tox@tceq.texas.gov).

What is TPM?

TPM (2,2,4-trimethyl-1,3-pentanediol monoisobutyrate or Texanol™) is a solvent used mainly in latex paints, as well as in other industrial and commercial applications. It is a colorless liquid with a mild odor. It evaporates at temperatures around 130 degrees F. It is also called propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3,-pentanediol; 2,2,4-trimethyl-1,3-pentanediol mono(2-methylpropanoate); NX 795; UCAR™ Filmer IBT; and TMPD-MIB.

How is TPM released into ambient air?

TPM may be emitted into the environment during manufacturing processes. If the manufacturing process temperature is high enough to allow TPM to evaporate, it is considered a volatile organic compound (VOC) and treated as such when evaluated for air permitting purposes. TPM may also be released into the environment as spray paint overspray, in which case it is considered to be particulate matter (PM), and treated as such when evaluated for air permitting purposes. Because TPM may be considered a VOC or PM, health-protective values were calculated based on TPM treated as a VOC as well as TPM treated as PM.

How can TPM affect my health?

Typical permitted levels of TPM found in ambient air should not cause adverse health effects. Human studies evaluating the adverse health effects of TPM were not available; therefore, animal studies were used to develop health-protective values. The animal studies showed no adverse health effects from exposure to very high levels of TPM. TPM is not expected to cause cancer, as classified by the TCEQ. The United States Environmental Protection Agency and the International Agency for Research on Cancer have not evaluated the potential for TPM to cause cancer.

Is TPM odorous or harmful to plants?

TPM may have a noticeable odor at moderate levels, but has not been shown to have an adverse effect on plants.

Why does the TCEQ set Regulatory Guidelines for TPM?

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The TCEQ has set various air quality guideline levels (ESLs 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 ESLs and ReVs for TPM 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 and ReVs developed, what the values are and what they are used for, please see the DSD.