**Section 218.111 Vapor Pressure of Volatile Organic Material**

a) If the VOM consists of only a single compound, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 218.112 of this Part) or the vapor pressure may be obtained from a publication such as: Boublik, T., V. Fried and E. Hala, "The Vapor Pressure of Pure Substances," Elsevier Scientific Publishing Co., New York (1973); Perry's Chemical Engineer's Handbook, McGraw-Hill Book Company (1984); CRC Handbook of Chemistry and Physics, Chemical Rubber Publishing Company (1986-87); and Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-Hill Book Company (1985).

b) If the VOM is in a mixture made up of both VOM compounds and compounds which are not VOM, the vapor pressure shall be determined by the following equation:



where:

|  |  |  |
| --- | --- | --- |
| Pvom | = | Total vapor pressure of the portion of the mixture which is composed of VOM; |
| n | = | Number of VOM components in the mixture; |
| i | = | Subscript denoting an individual component; |
| Pi | = | Vapor pressure of a VOM component determined in accordance with subsection (a) of this Section; |
| Xi | = | Mole fraction of the VOM component of the total organic mixture. |

 c) If the VOM is in a mixture made up of only VOM compounds, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 218.112 of this Part) or by the above equation.

(Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)