**Section 219.109 Vapor Pressure of Volatile Organic Liquids**

a) If the VOL consists of only a single compound, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 219.112 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 VOL is a mixture, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 219.112 of this Part) or by the following equation:



where:

|  |  |  |
| --- | --- | --- |
| Pvol | = | Total vapor pressure of the mixture; |
|  |  |  |
| n | = | Number of components in the mixture; |
|  |  |  |
| i | = | Subscript denoting an individual component; |
|  |  |  |
| Pi | = | Vapor pressure of a component determined in accordance with subsection (a) of this Section; |
|  |  |  |
| xi | = | Mole fraction of the component in the total mixture. |

(Source: Amended at 17 Ill. Reg. 16918, effective September 27, 1993)