
40 C.F.R. § 59.505

How do I demonstrate compliance with the reactivity limits?

(a) To demonstrate compliance with the PWR limits presented in Table 1 of this subpart, you must calculate the PWR for each coating as described in paragraphs (a)(1) through (2) of this section:

(1) Calculate the weighted reactivity factor (WRF) for each propellant and coating component using Equation 1:

$$WRF_i = RF_i \times WF_i \quad \text{Equation 1}$$

Where:

WRF_i = weighted reactivity factor of component i, g O₃/g component i. RF_i = reactivity factor of component i, g O₃/g component i, from Table 2A, 2B, or 2C. WF_i = weight fraction of component i in the product,

(2) Calculate the PWR of each product using Equation 2:

$$PWR_p = (WRF)_1 + (WRF)_2 + \dots + (WRF)_n \quad \text{Equation 2}$$

Where:

PWR_p = PWR for product P, g O₃/g product. WRF_1 = weighted reactivity factor for component 1, g O₃/g component. WRF_2 = weighted reactivity factor for component 2, g O₃/g component. WRF_n = weighted reactivity factor for component n, g O₃/g component.

(b) In calculating the PWR, you must follow the guidelines in paragraphs (b)(1) through (b)(4) of this section.

(1) Any ingredient which does not contain carbon is assigned a RF value of 0.

(2) Any aerosol coating solid, including but not limited to resins, pigments, fillers, plasticizers, and extenders is assigned a RF of 0. These items do not have to be identified individually in the calculation.

(3) All individual compounds present in the coating in an amount equal to or exceeding 0.1 percent will be considered ingredients regardless of whether or not the ingredient is reported to the manufacturer.

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