نحوه محاسبه مقدار سیستم آیروسل در استانداردهای مختلف

Design Approach

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Design Principle (UL Standards)

Land Applications

M = V x D x S.F

M (g) = Mass of Aerosol forming compound
V (m³) = Protected Volume
D (g/m³) = Extinguishing Application Density (EAD)
SF = Safety Factor (30%)

Fire Class	*E.A.D UL (g/m³)*
A	84
B	84
C	84

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Design Principle (EN 15276 or ISO 15779)

Land Applications

M = V x D x S.F

M (g) = Effective mass of discharged extinguishant
V (m³) = Protected Volume
D (g/m³) = Extinguishing Application Density (EAD)
SF = Safety Factor (30%)

Fire Class	*E.A.D. EN (g/m³)*
A (polymeric)	46
A (wood)	74
B	52

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Design Principle

7.3.2.1.1 The minimum design application density for a Class B fuel hazard shall be the extinguishing application density, as determined in 7.3.2.1, multiplied by a safety factor of 1.3

7.3.2.2.1 The minimum design application density for a Class A surface fire hazard shall be the extinguishing applica- tion density, as determined in 7.3.2.2, multiplied by a safety factor of 1.3.

7.3.2.3 Class C Fuels. The minimum design application density for Class C hazards shall be at least that for the class of fire hazard being protected as defined in 3.3.7.1 and 3.3.7.2.

7.3.2.4 Fuel Combinations. For combinations of Class A and Class B fuels, the design application density shall be the value for the fuel requiring the greater design application density.

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Design Principle (NFPA 2010 -2020 Standard)

7.4 Total Flooding Quantity.

7.4.1 Quantity Calculation. The mass of aerosol-forming compound required shall be calculated from the following formula:

$$m = d * f * v$$

m = total flooding quantity [g (lb)]
d = design application density [g/m^3 (lb/ft^3)] (see Section 7.4)
f = product of all additional design factors, as applicable (see 7.5.2)
V = protected volume [m^3 (ft^3)]

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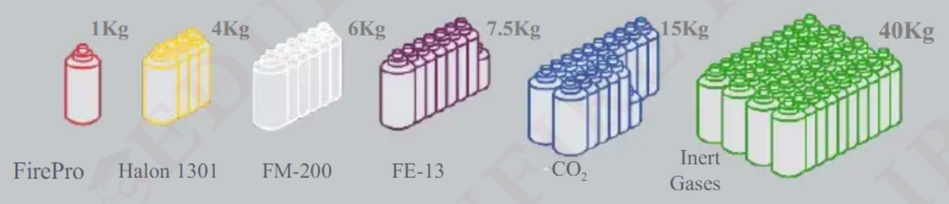
FirePro – Effective & **Efficient**

Agent Mass Comparison:

- **4x more efficient than Halon 1301**
- **6x more efficient than FM-200**
- **7.5x more efficient than FE-13**
- **15.5x more efficient than CO_2**
- **40x more efficient than inert gases**



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نکته: اعداد از کاتالوگ شرکت FirePro برداشته شده است.