

FIRES CLASSIFICATION

Fire is classified into several classes based on the fuel / burning material. Understanding class of fire is importantly needed prior to determine the type of fire extinguisher and extinguishing way.

Fire classification may different between one and another country. This distinction appears due to used standards in respective country. This article would only discuss fire classification as per these 3 following standards and regulation.

National Fire Protection Association (NFPA) 10

NFPA 10 standard is Standard for Portable Fire Extinguishers. NFPA standard is applied in US countries. In the standard, there are 5 fire classes.

Class A: fire in ordinary combustibile solid materials excluding metal. For example: wood, cloth, rubber, paper, and many plastics.

Class B: fire in flammable liquids, combustible liquids, greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases.

Class C: fire that involves energized electrical equipment

Class D: fire in combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium.

Class K: fire in cooking appliances that involve combustibile cooking media (vegetable or animal oils and fats).

British Standard European Norm (BS EN) 2

BS EN 2 is a standard about classification of fires that used in UK and European countries. In BS EN 2, fire is also divided into 5 classes. The difference compared to NFPA 10 is in classifying flammable gas and electrical equipment.

Class A: fire in ordinary combustibile solid materials excluding metal.

Class B: fire in flammable liquids.

Class C: fire in flammable gases.

Class D: fire in combustible metals.

Class F: fire in cooking appliances and fats.

Fire on electrical equipment is not specified in the standard since it can be involved in any class of fire.

Regulation of the Minister of Manpower (Permenaker) No. 04/1980

Permenaker 04/1980 is an Indonesian regulation for installation and maintenance of portable fire extinguisher. Different with the previous standards, fire is only classified into 4 classes in this regulation.

Class A: fire in ordinary combustibile solid materials excluding metal.

Class B: fire in flammable liquids, combustible liquids, and flammable gases.

Class C: fire that involves energized electrical equipment

Class D: fire in combustible metals.

Reference:

- [1] NFPA 10 Standard for Portable fire Extinguisher (2013)
- [2] BS EN 2 Classification of Fires (1992)
- [3] Peraturan Menteri Tenaga Kerja dan Transmigrasi RI No. Per.04/Men/1980 (1980)

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