

## COMMODITY CLASSES

**C**ommodity classification and corresponding protection requirements shall be determined based on the makeup of individual storage units (i.e., unit load, pallet load).

Commodity classes will be described as below:

- a. Class I  
Class I commodity shall be defined as a noncombustible product that meets one of the following criteria:
  - 1) Placed directly on wood pallets.
  - 2) Placed in single-layer corrugated cartons, with or without single-thickness cardboard dividers, with or without pallets.
  - 3) Shrink-wrapped or paper-wrapped as a unit load with or without pallets.
- b. Class II  
Class II commodity shall be defined as a noncombustible product that is in slatted wooden crates, solid wood boxes, multi-layered corrugated cartons, or equivalent combustible packing material, with or without pallets.
- c. Class III  
Class III commodity shall be defined as a product fashioned from wood, paper, natural fibers, or Group C plastics with or without cartons, boxes, or crates and with or without pallets. Class III commodity shall be permitted to contain a limited amount (5 percent by weight or volume or less) of Group A or Group B plastics.
- d. Class IV  
Class IV commodity shall be defined as a product, with or without pallets, that meets one of the following criteria:
  - 1) Constructed partially or totally of Group B plastics.
  - 2) Consists of free-flowing Group A plastic materials.

3) Contains within itself or its packing an appreciable amount (5 percent to 15 percent by weight or 5 percent to 25 percent by volume) of Group A plastics.

Classification of Plastics, Elastomers, and Rubber shall be classified as Group A, Group B, or Group C.

### Group A

The following materials shall be classified as Group A:

- 1) ABS (acrylonitrile butadiene styrene copolymer)
- 2) Acetal (polyformaldehyde)
- 3) Acrylic (polymethyl methacrylate)
- 4) Butyl rubber
- 5) EPDM (ethylene-propylene rubber)
- 6) FRP (fiberglass-reinforced polyester)
- 7) Natural rubber (if expanded)
- 8) Nitrile-rubber (acrylonitrile butadiene rubber)
- 9) PET (thermoplastic polyester)
- 10) Polybutadiene
- 11) Polycarbonate
- 12) Polyester elastomer
- 13) Polyethylene
- 14) Polypropylene
- 15) Polystyrene
- 16) Polyurethane
- 17) PVC (polyvinyl chloride - highly plasticized, with plasticizer content greater than 20 percent)
- 18) SAN (styrene acrylonitrile)
- 19) SBR (styrene butadiene rubber)

### Group B

The following materials shall be classified as Group B:

- 1) Cellulosics (cellulose acetate, cellulose acetate butyrate, ethyl cellulose)
- 2) Chloroprene rubber
- 3) Fluoroplastics (ECTFE – ethylene chlorotrifluoro ethylene copolymer; ETFE – ethylene tetra fluoroethyl enecopolymer; FEP – fluorinated ethylene propylene copolymer)
- 4) Natural rubber (not expanded)
- 5) Nylon (nylon 6, nylon 6/6)
- 6) Silicone rubber

### Group C

The following materials shall be classified as Group C:

- 1) Fluoroplastics (PCTFE - polychlorotrifluoroethylene; PTFE - polytetrafluoroethylene)
- 2) Melamine (melamine formaldehyde)
- 3) Phenolic
- 4) PVC (polyvinyl chloride - flexible - PVCs with plasticizer content up to 20 percent)
- 5) PVDC (polyvinylidene chloride)
- 6) PVDF (polyvinylidene fluoride)
- 7) PVF (polyvinyl fluoride)
- 8) Urea (urea formaldehyde)

### Reference:

- [1] NFPA 13 (2013) - Standard for the Installation of Sprinkler Systems
- [2] NFPA 231 (1998) - Standard for General Storage

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