

APPENDIX G

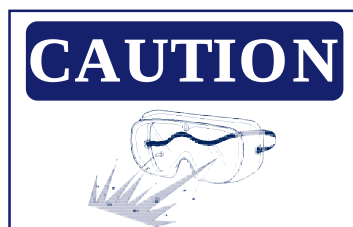
SAFETY SYMBOLS

Examples of Common Safety Symbols

Fire Extinguishers and Agents

National Fire Protection Association (NFPA) Hazard Labels

EXAMPLES OF COMMON SAFETY SYMBOLS



FIRE EXTINGUISHERS AND AGENTS



Class A Fire
Common
Combustibles



Class B Fire
Flammable
Liquids



Class C Fire
Electrical



Class D Fire
Flammable
Metals

Fire Extinguishers and Agents

Suitable for Use on This Type Fire	Agent Characteristics	Horizontal Range	Discharge Time
	Regular Dry Chemical Sodium Bicarbonate Discharges white cloud Leaves residue Non-freezing	5–20 feet	8–25 seconds
 or 	Multipurpose Dry Chemical Ammonium Phosphate Discharges yellow cloud Leaves residue Non-freezing	5–20 feet	8–25 seconds
	Purple-K Dry Chemical Potassium Bicarbonate Discharges blue cloud Leaves residue Non-freezing	5–20 feet	8–25 seconds
	KCl Dry Chemical Potassium Chloride Discharges white cloud Leaves residue Non-freezing	5–20 feet	8–25 seconds
	Carbon Dioxide Inert carbon dioxide gas Discharges cold white cloud Leaves no residue Non-freezing	3–8 feet	8–30 seconds
	Halogenated Agent Halogenated hydrocarbons Discharges white vapor Leaves no residue Non-freezing	4–8 feet	8–10 seconds

Suitable for Use on This Type Fire	Agent Characteristics	Horizontal Range	Discharge Time
	Water Tap water with corrosive inhibitor Discharges spray or stream Leaves yellow residue Protect from freezing	30–40 feet	1 minute
	Anti-freeze Solution Calcium Chloride Discharges spray or stream Leaves residue Non-freezing	30–40 feet	1 minute
	Loaded Stream Alkali-Metal-Salt Discharges spray or stream Leaves residue Non-freezing	30–40 feet	1 minute
	Foam Water and Detergent Discharges foamy solution Leaves powder residue Non-freezing	10–15 feet	24 minutes
	Dry Powder Special Compound Sodium Chloride or Graphite materials Discharges in stream Leaves residue Non-freezing	5–20 feet	25–30 seconds

Using a Fire Extinguisher

1. Extinguishers must be located and marked to be easily seen and the area around the extinguisher must be kept clean.
2. Regular inspections and tagging or marking of inspection dates is essential.
3. Gauges should be checked for readings to insure that unit is functional.
4. Pressurized units are considered as “unfired pressure vessels” and require periodic static pressure tests in accordance with NFPA Codes.
5. Users must be well trained in their use. This requires hands-on and repeated training.
6. Water-type extinguishers must never be used on electrical or metal fires.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD LABELS



NFPA HAZARD RATINGS: HEALTH

Rating	Description
4	Materials that could cause death or major residual injury. This rating includes: • materials that can penetrate ordinary rubber protective clothing. • materials that, under normal conditions or fire conditions, give off gases that are toxic or corrosive through inhalation or contact with the skin.
3	Materials that, upon short exposure, could cause serious temporary or residual injury. This rating includes: • materials giving off highly toxic combustion products. • materials corrosive to living tissue or toxic by skin absorption.
2	Materials that, on intense or continued exposure, cause temporary incapacitation or residual injury. This rating includes: • materials giving off toxic combustion products. • materials giving off highly irritating combustion products. • materials that, under normal conditions or fire conditions, give off toxic vapors.
1	Materials that, on exposure, cause irritation and minor residual injury. This rating includes: • materials that, under fire conditions, would give off irritating combustion products. • materials that cause irritation of the skin without destruction of tissue.
0	Materials that, on exposure under fire conditions, would offer no hazard beyond that of combustible material.

NFPA HAZARD RATINGS: SPECIAL

Rating	Description
OX	Denotes materials that are oxidizing agents. These compounds give up oxygen readily, remove hydrogen easily, remove hydrogen from other compounds, or attract negative electrons.
W	Denotes materials that are water-reactive. These compounds undergo rapid energy releases on contact with water.

NFPA HAZARD RATINGS: FLAMMABILITY

Rating	Description	Flash Point
4	Materials that will rapidly or completely vaporize at atmospheric pressure and normal temperatures or that are readily dispersed in air, and that will burn readily. This rating includes: • very flammable gases • extremely volatile liquids • dust that readily burns or explodes when dispersed in the air	below 22.8° C
3	Liquids and solids that can be ignited under all temperature conditions. These produce hazardous atmospheres with air under all temperatures. This rating includes: • liquids which vaporize enough to ignite under normal conditions • solids that ignite spontaneously	between 22.8° C and 37.7° C
2	Materials that must be moderately heated or exposed to high temperatures before ignition occurs. These materials would not form hazardous atmospheres under normal conditions. This rating includes: • liquids which must be moderately heated to ignite. • solids and semisolids that readily give off flammable vapors.	liquids between 37.7° C and 200° C
1	Materials that must be preheated before ignition can occur. These require considerable preheating, under all temperature conditions. This rating includes most ordinary combustible materials.	200° C
0	Materials that do not burn. This rating includes materials that will not burn in air or when exposed to a temperature of 1500° C for a period of 5 minutes.	1500° C

NFPA HAZARD RATINGS: REACTIVITY

Rating	Description
4	Materials that are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This rating includes materials that are sensitive to thermal shock at normal temperatures and pressures.
3	Materials that are capable of detonation or explosive reaction but that require a strong initiating source or that must be heated under confinement before initiation. This rating includes materials that are sensitive to shock at elevated temperatures and pressures or that react explosively with water without requiring heat or confinement.
2	Materials that are normally unstable and readily undergo violent chemical change but do not detonate. This rating includes materials that can undergo chemical change with rapid release of energy at normal temperatures and pressures or undergo violent chemical change at elevated temperatures and pressures. Also includes materials that react violently with water or which may form potentially explosive mixtures with water.
1	Materials that are normally stable, but that can become unstable at elevated temperatures and pressures or that may react with water with some release of energy but not violently.
0	Materials that are normally stable, even under fire exposure conditions, and are not reactive with water.