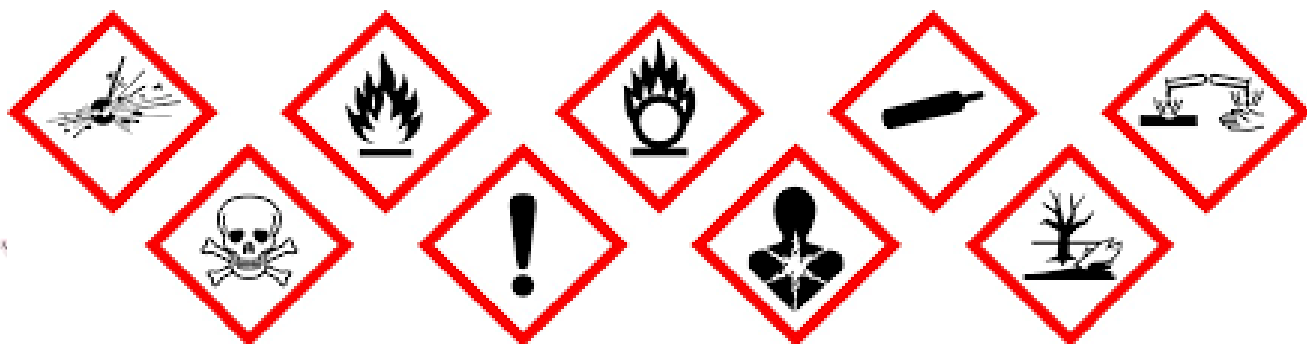


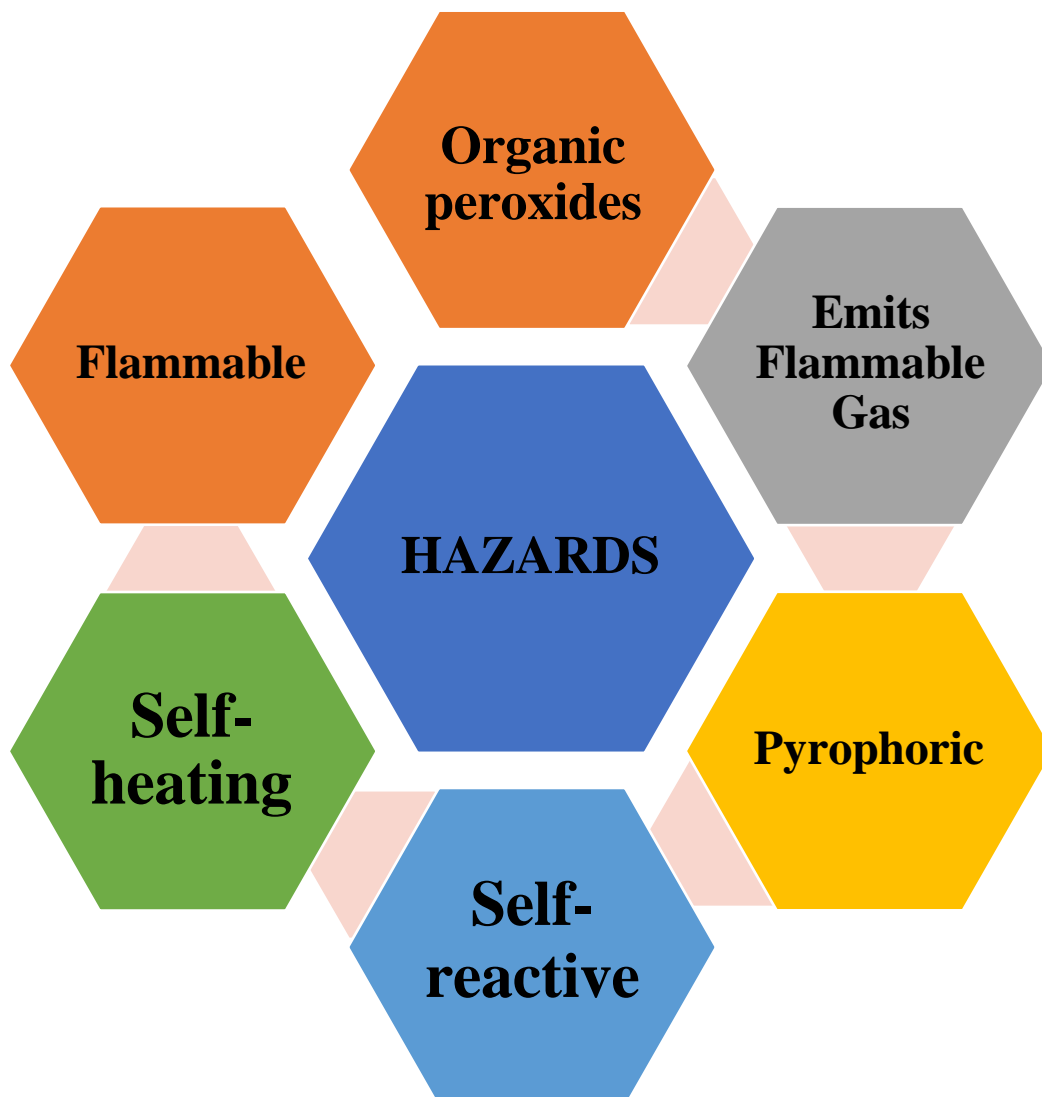
"Decode the Signs, Prevent the Hazards! A Visual Guide to Chemical Safety Pictograms"



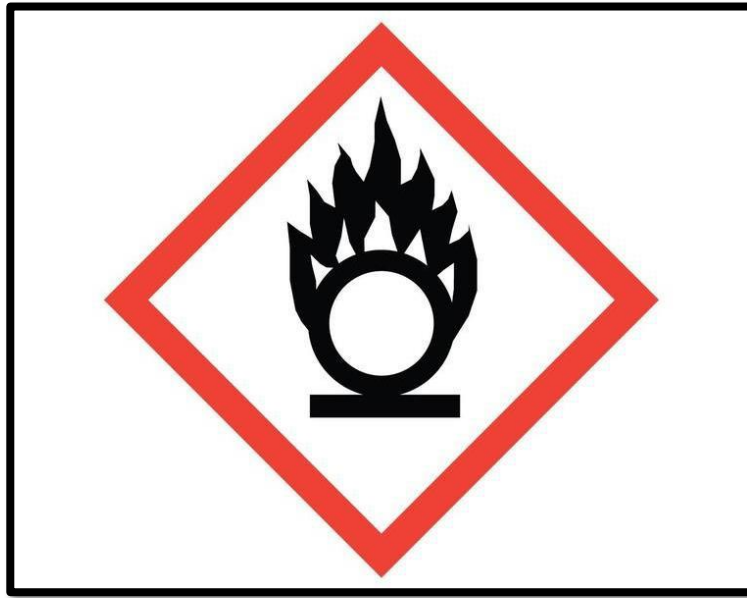
FLAME



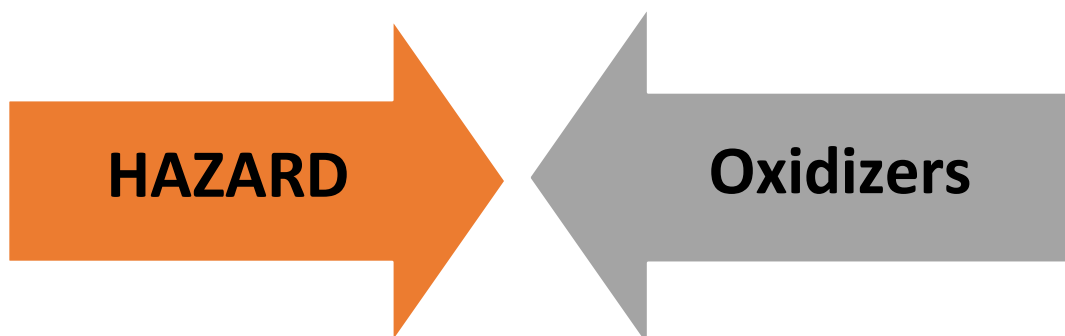
“These chemicals burn or can release gases that burn.”



FLAME OVER CIRCLE



“These chemicals give off oxygen and can make a fire spread.”

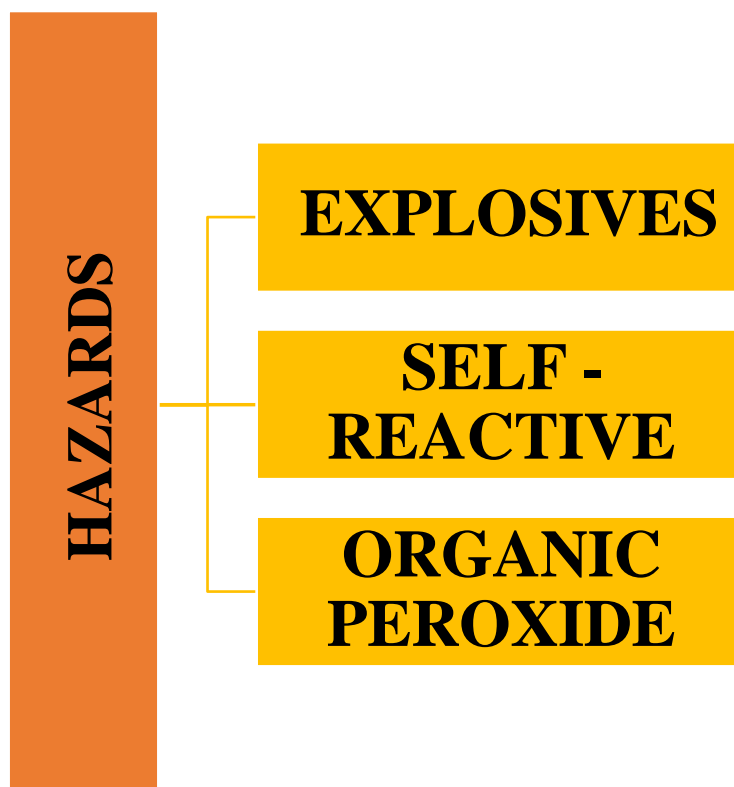


“Oxidizers are hazardous materials that can increase the risk of fire or explosion.”

EXPLODING BOMB



“These chemicals can explode.”

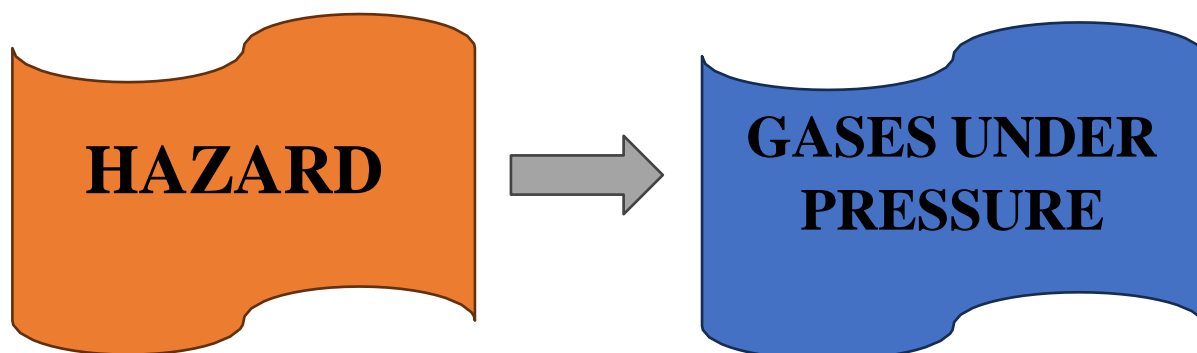


GAS CYLINDER



“Gases and liquids under pressure can explode.”

“This pictogram is used for both pressurized gases and liquefied gases such as liquid nitrogen.”

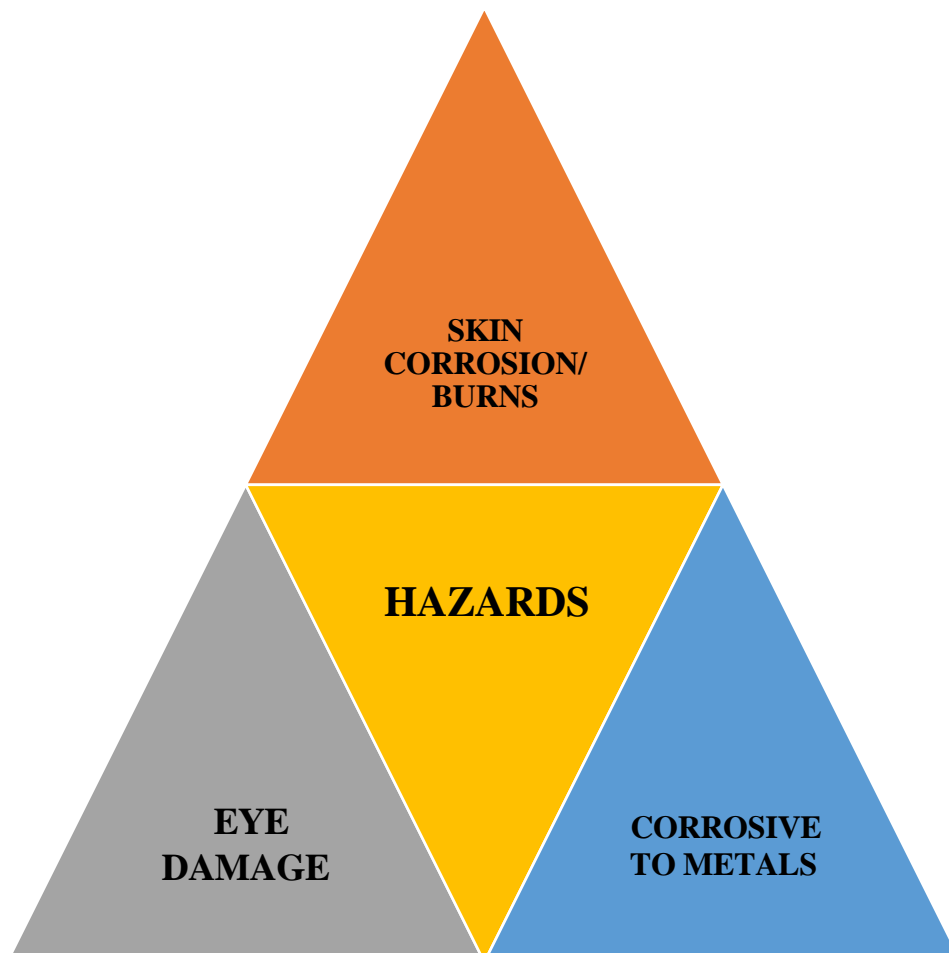


CORROSION



“These chemicals cause permanent damage to skin or eyes.”

“These chemicals destroy metals.”



HEALTH HAZARDS



“These chemicals cause serious health problems.”
“Some problems show up immediately, but some may show up much later.”

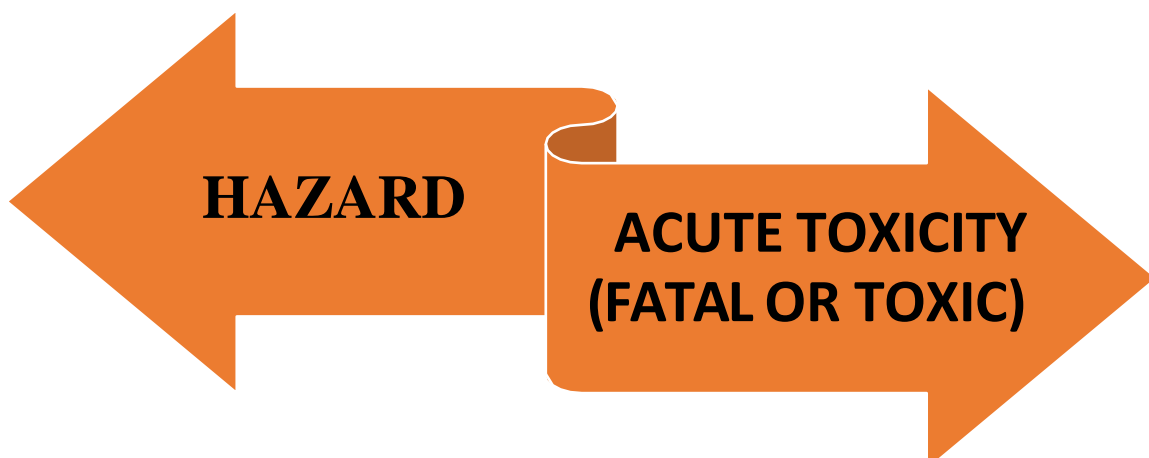


SKULL & CROSS-BONE



“These chemicals are poisons that quickly cause sickness or death.”

“A toxin may attack one or more parts of the body, such as the liver, kidneys, nerves, lungs, skin, eyes, or bone.”



EXCLAMATION MARK



“These chemicals cause health problems. Usually less toxic than chemicals labelled with the Health Hazard or Skull and Cross-bone pictograms.”

“This pictogram is also used for chemicals that can destroy the ozone layer.”



**Irritant (skin
and eye)**

**Skin
Sensitizer**

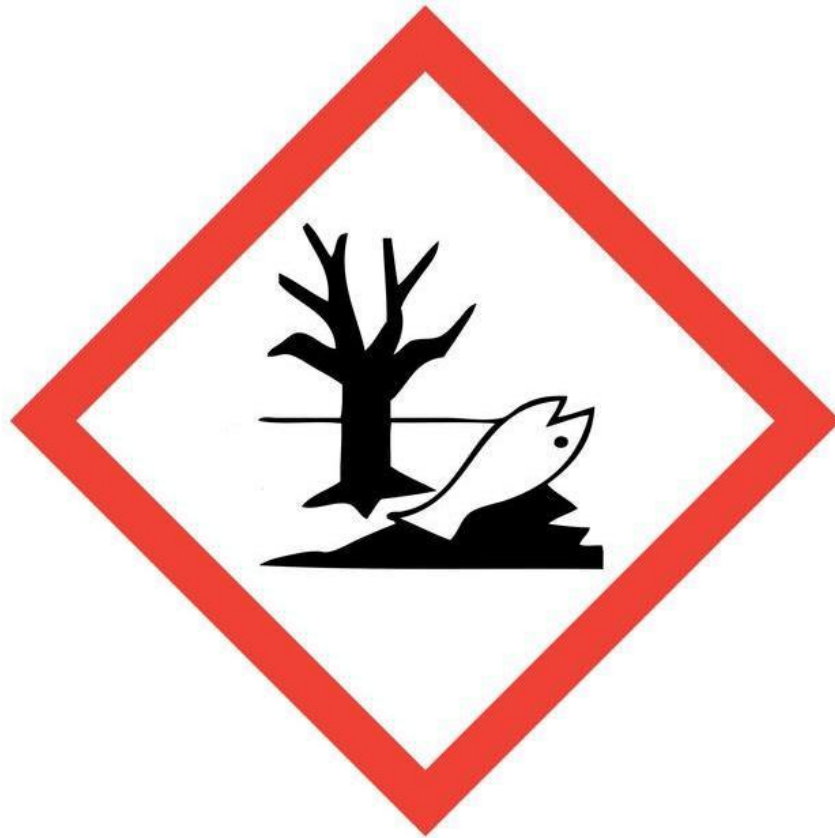
**Acute Toxicity
(harmful)**

**Hazardous to
Ozone Layer**

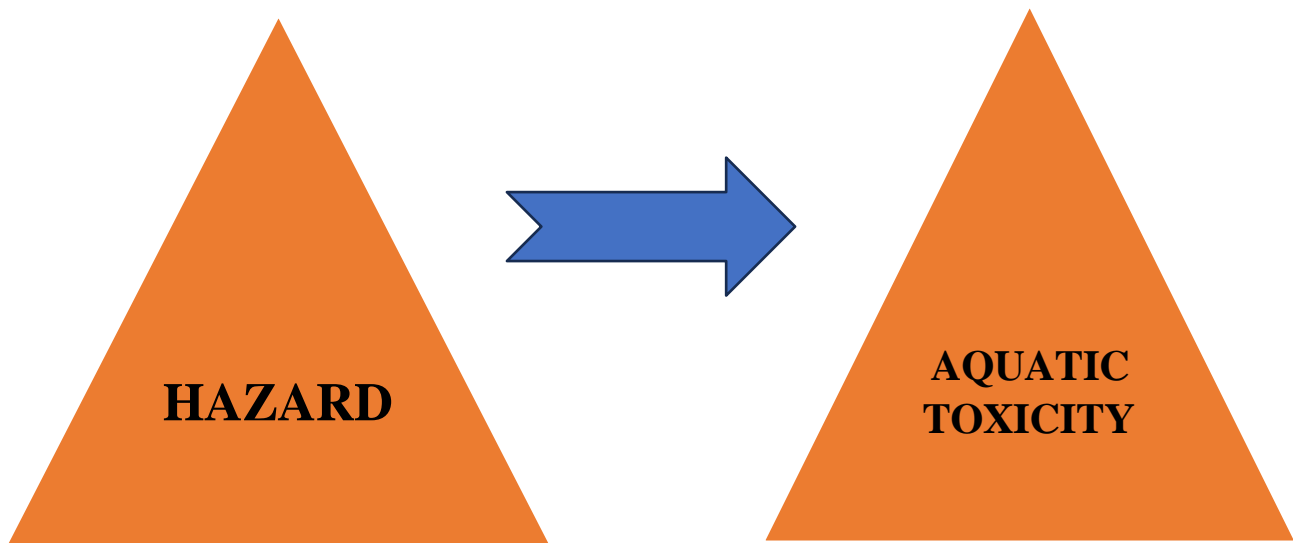
**Respiratory Tract
Irritant**

**Narcotic
Effects**

ENVIRONMENT



“These chemicals are dangerous if they get into rivers, lakes or oceans.”



GHS Hazard Pictogram Codes (Globally Harmonized System)

Pictogram Hazard Category GHS Code (Hazard Class)

Explosive : GHS01 (Class 1: Explosives)

Flammable: GHS02 (Class 2, 3, 4: Flammable gases, liquids, solids)

Oxidizing: GHS03 (Class 5: Oxidizers and organic peroxides)

Gases Under Pressure: GHS04 (Class 2: Compressed, liquefied, or dissolved gases)

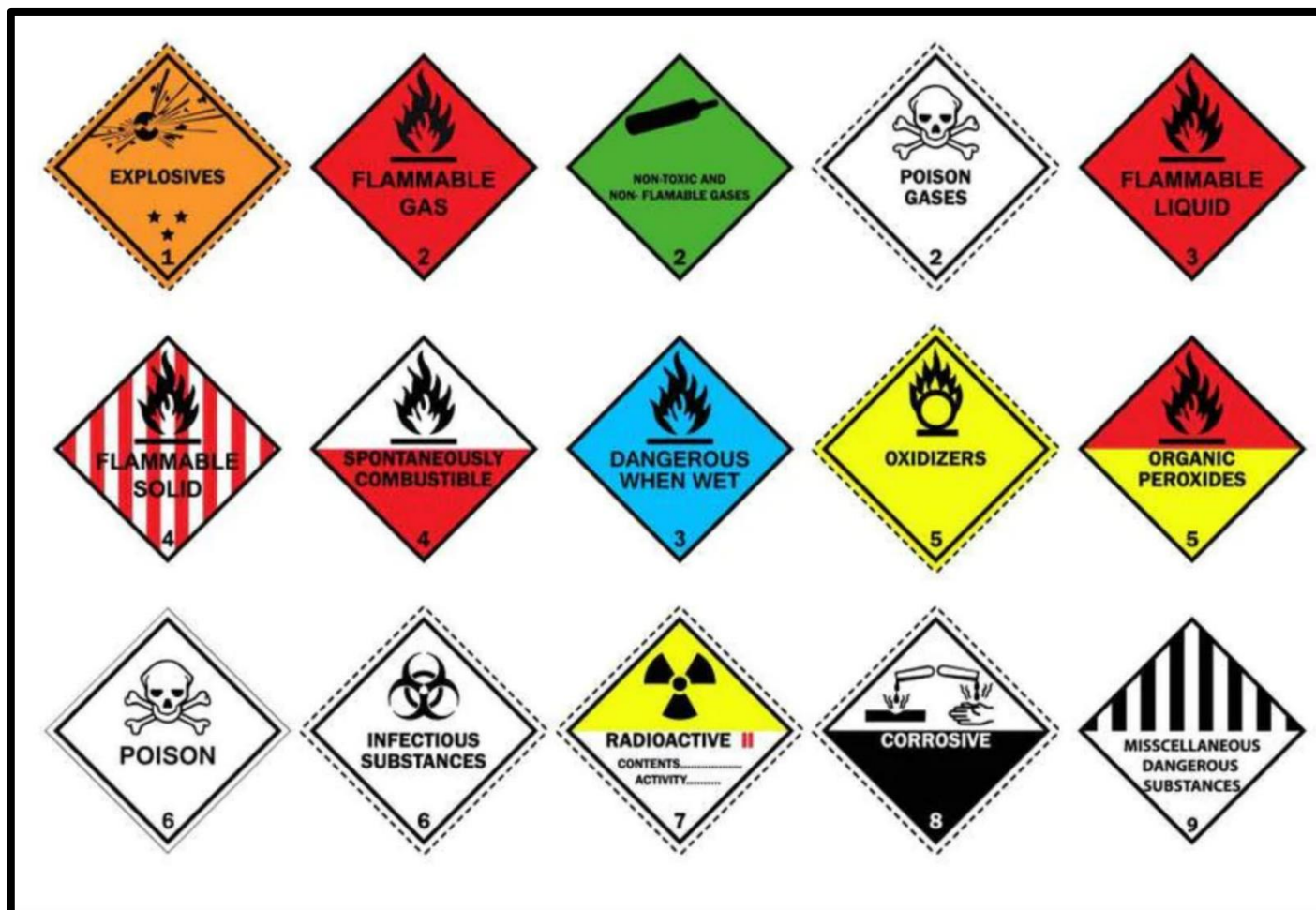
Corrosive: GHS05 (Class 8: Corrosive to skin, eyes, and metals)

Acute Toxicity: GHS06 (Class 6: Highly toxic substances)

Harmful / Irritant: GHS07 (Class 6: Irritants, sensitizers, acute toxicity)

Serious Health Hazard: GHS08 (Class 6: Carcinogens, mutagens, reproductive toxins)

Environmental Hazard: GHS09 (Class 9: Harmful to aquatic life)



UN Hazard Class Codes (United Nations Transport Codes)

Class Code	Hazard Category	Description
Class 1	Explosives	Substances with explosion risk (e.g., TNT, fireworks).
Class 2	Gases	Flammable, toxic, or compressed gases (e.g., propane, chlorine).
Class 3	Flammable Liquids	Fuels, alcohols, and solvents (e.g., gasoline, ethanol).
Class 4	Flammable Solids	Easily combustible solids (e.g., sulfur, phosphorus).
Class 5	Oxidizing Agents & Peroxides	Oxygen-releasing substances (e.g., hydrogen peroxide).
Class 6	Toxic & Infectious Substances	Poisons and biohazards (e.g., cyanide, viruses).
Class 7	Radioactive Material	Nuclear and radiation hazards (e.g., uranium).
Class 8	Corrosives	Acidic and basic corrosive substances (e.g., sulfuric acid).
Class 9	Miscellaneous Dangerous Substances	Other hazardous materials (e.g., lithium batteries).

UN HAZARD CLASSES AND WARNING DIAMONDS					
CLASS 1    Explosive substances and articles			CLASS 2 – GASES  Flammable gas  Non-flammable gas  Toxic gas		
CLASS 3  Flammable liquid	CLASS 4.1  Flammable solid	CLASS 4.2  Liable to spontaneous combustion	CLASS 4.3  Flammable on contact with water	CLASS 5.1  Oxidising agent	CLASS 5.2  Organic peroxide
CLASS 6.1  Toxic	CLASS 6.2  Infectious substance	CLASS 7    Radioactive material		CLASS 8  Corrosive	CLASS 9  Miscellaneous

NFPA Hazard Codes (National Fire Protection Association)

Color	Hazard Type	Scale (0-4, Increasing Hazard)
● Red	Flammability	0 (Non-flammable) → 4 (Highly flammable)
● Blue	Health Hazard	0 (No hazard) → 4 (Deadly)
● Yellow	Reactivity	0 (Stable) → 4 (Explosive)
○ White	Special Hazard	OX (Oxidizer), ACID, COR (Corrosive), W (Water Reactive)

HEALTH HAZARD

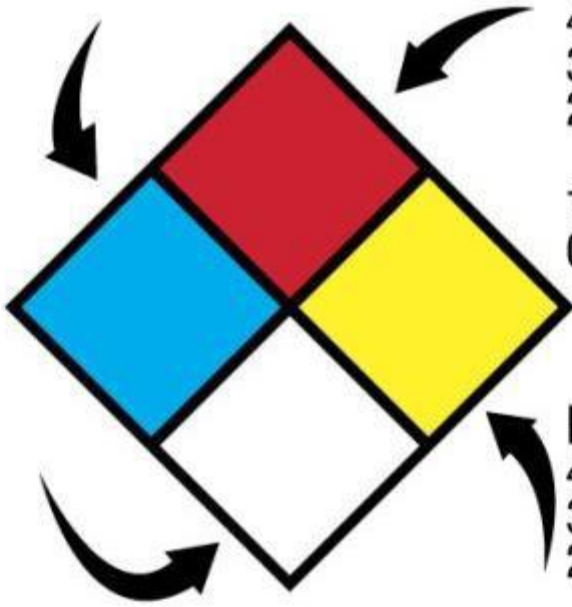
4 Deadly
3 Extreme danger
2 Hazardous
1 Slightly hazardous
0 Normal material

SPECIFIC HAZARD

ACID-Acid
ALK-Alkali
COR-Corrosive
OXY-Oxidizer
P-Polymerization
☢-Radioactive
W-Use No Water

CHEMICAL NAME _____

MSDS # _____



FIRE HAZARD

Flash Points
4 Below 73° F
3 Below 100° F
2 Above 100° F not exceeding 200° F
1 Above 200° F
0 Will not burn

Reactivity

4 May detonate
3 Shock & heat
2 Violent chemical change
1 Unstable if heated
0 Stable

“The National Fire Protection Association (NFPA) uses a color-coded diamond to identify the hazards of a material. This system is called NFPA 704 and is also known as the NFPA Hazard Diamond.”

ADR & IMDG Codes (Transport Regulations)

Code	Hazard Type	Transport Regulation
ADR 2.1	Flammable Gases	Road Transport
ADR 3	Flammable Liquids	Road Transport
IMDG 4.1	Flammable Solids	Maritime Transport
IMDG 8	Corrosives	Maritime Transport

ADR	EUROPEAN - MARITIME & GOODS				IMDG
 EXPLOSIVES ROAD TRANSPORT	 EXPLOSIVES FLAMMABLE LIQUIDS	 CLASS 2 FLAMMABLE LIQUIDS	 CLASS 3 OXIDIZING LIQUIDS	 CLASS 5 OXIDIZING SOLIDS	 OXIDIZING SOLIDS
 CLASS 1 FLAMMABLE LIQUIDS	 CLASS 2 FLAMMABLE SOLIDS	 CLASS 2 FLAMMABLE LIQUIDS	 CLASS 2 FLAMMABLE GASES	 CLASS 3 CORROSIVE LIQUIDS	 CLASS 7 RADIOACTIVE SUBSTANCES
 OXIDIZING SUBSTANCES	 CLASS 3 FLAMMABLE LIQUIDS	 CLASS 3 TOXIC	 CLASS 6 INFECTIOUS	 CLASS 9 CORROSIVE SOLIDS	 CLASS 7 RADIOACTIVE SUBSTANCES
 DANGEROUS	 CLASS 3 RADIOACTIVE SOLIDS	 CLASS 3 RADIOACTIVE LIQUIDS	 CLASS 6 RADIOACTIVE SOLIDS	 CLASS 9 MISCELLANEOUS DANGEROUS GOODS	 CLASS 6 MISCELLANEOUS DANGEROUS GOODS

“ADR and IMDG are regulations that govern the transport of dangerous goods by road and sea, respectively.”

- [International Carriage of Dangerous Goods by Road](#)
- [International Maritime Dangerous Goods Transport Code](#)

Summary of Key Safety & Hazard Codes

GHS Codes (GHS01 - GHS09) → For labelling & classification

UN Codes (Class 1 - Class 9) → For transport & handling

NFPA Codes (0-4) → Quick hazard identification

ADR & IMDG Codes → For road & sea transportation



"Knowing the hazard symbols isn't an option—it's a necessity."

“EXCELL PURITY, ASSURE SAFETY”