

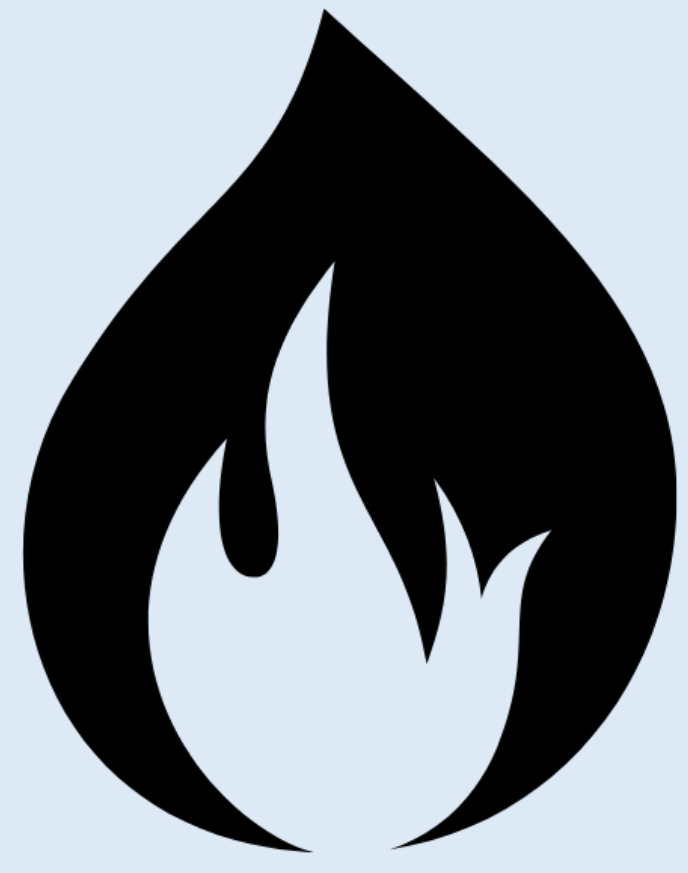
HYDROGEN SAFETY



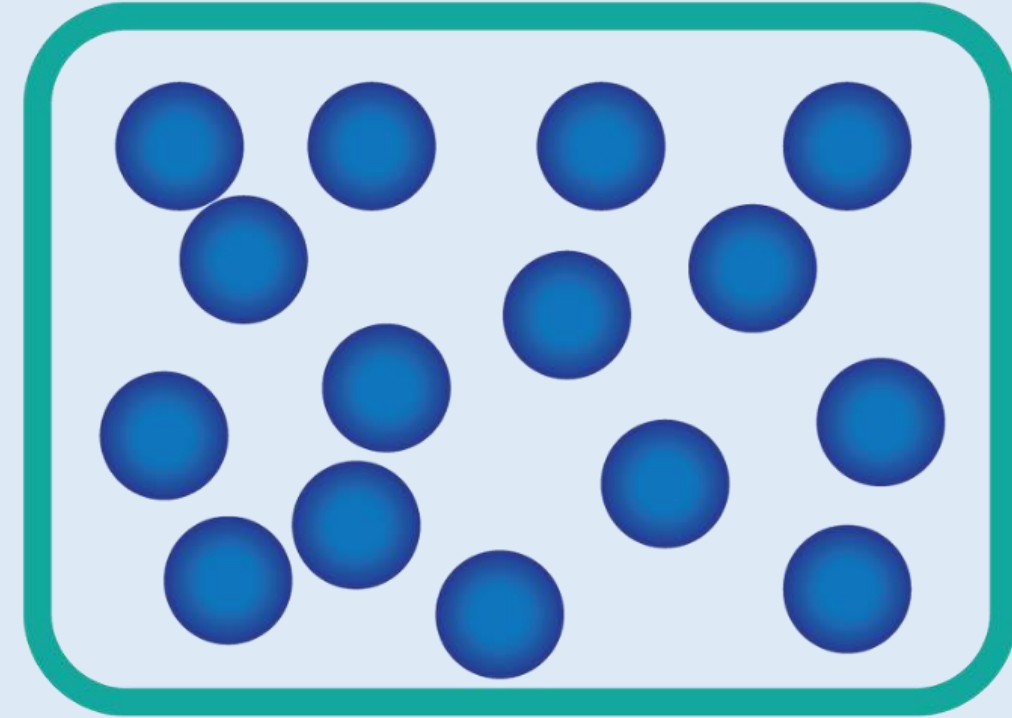
Odorless



Non-toxic



**Less radiant
heat**



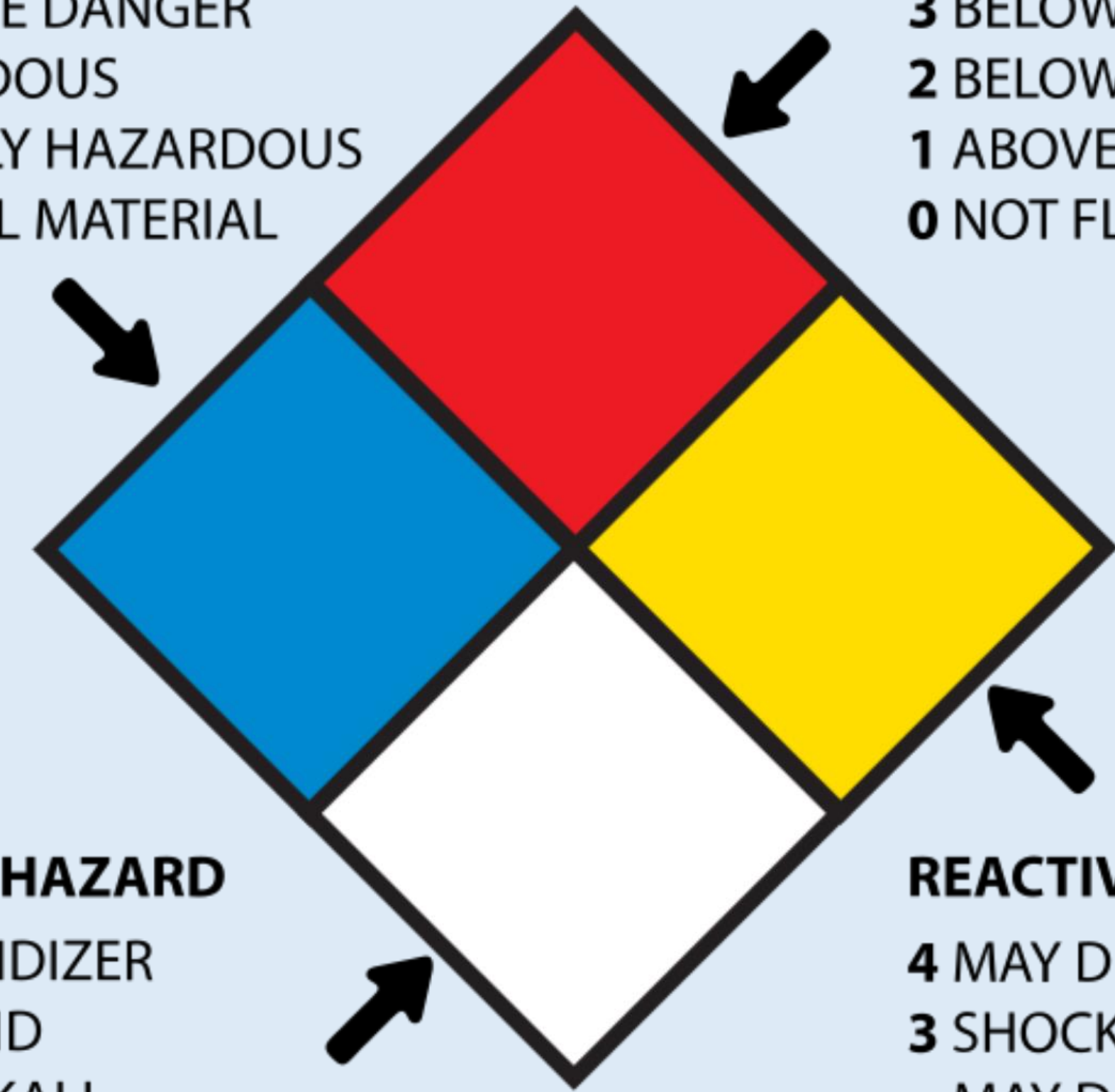
Dispersibility

HEALTH HAZARD

- 4 DEADLY
- 3 EXTREME DANGER
- 2 HAZARDOUS
- 1 SLIGHTLY HAZARDOUS
- 0 NORMAL MATERIAL

FIRE HAZARD

- 4 BELOW 25 °C
- 3 BELOW 37 °C
- 2 BELOW 93 °C
- 1 ABOVE 93 °C
- 0 NOT FLAMMABLE



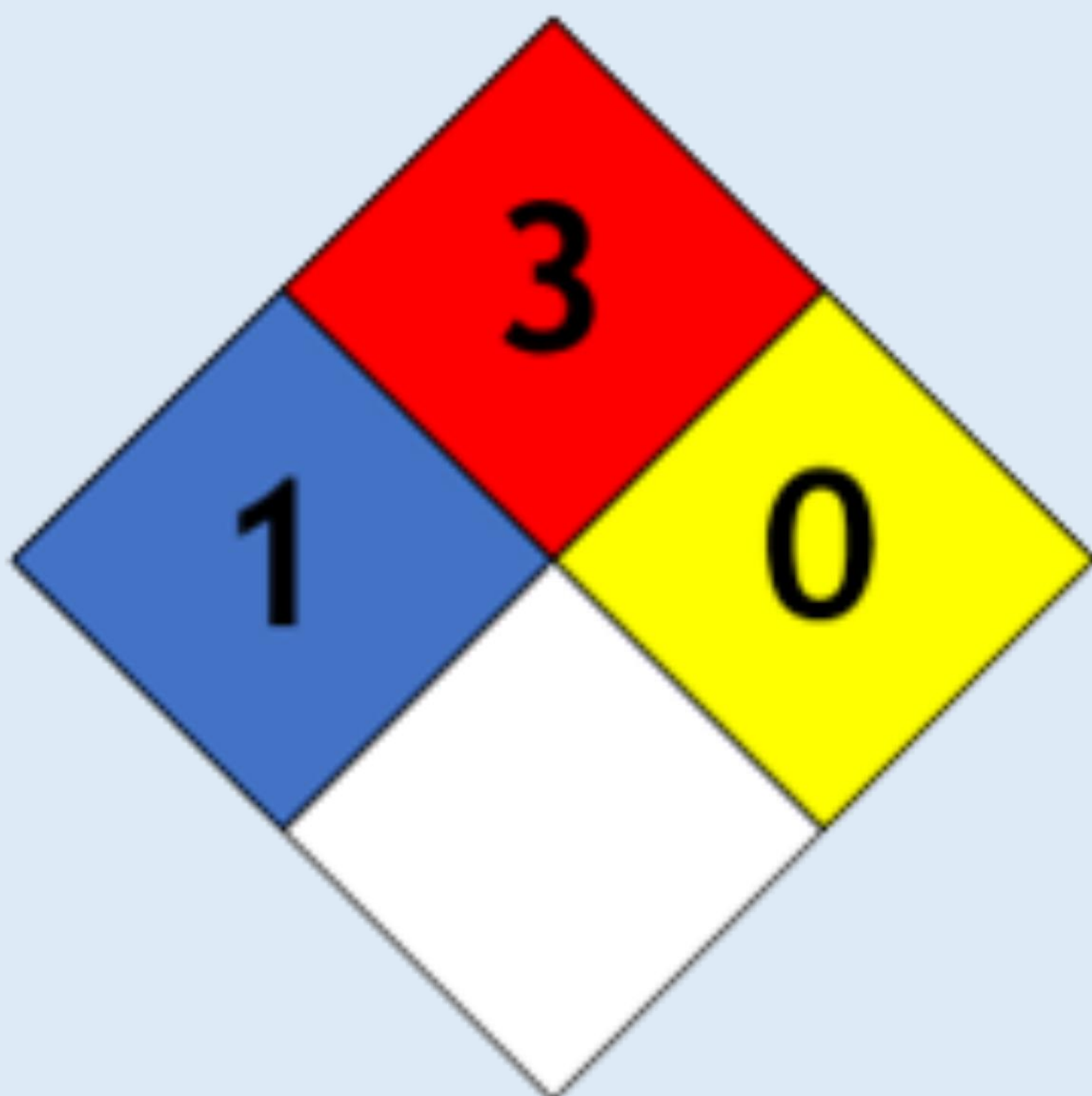
SPECIFIC HAZARD

- OXY OXIDIZER
- ACID ACID
- ALK ALKALI
- CORR CORROSIVE
- ☸ RADIOACTIVE
- ☞ USE NO WATER

REACTIVITY

- 4 MAY DETONATE
- 3 SHOCK + HEAT MAY DETONATE
- 2 VIOLENT REACTION
- 1 UNSTABLE IF HEATED
- 0 STABLE

NFPA 704



Petroleum



Natural gas



Hydrogen

Challenges



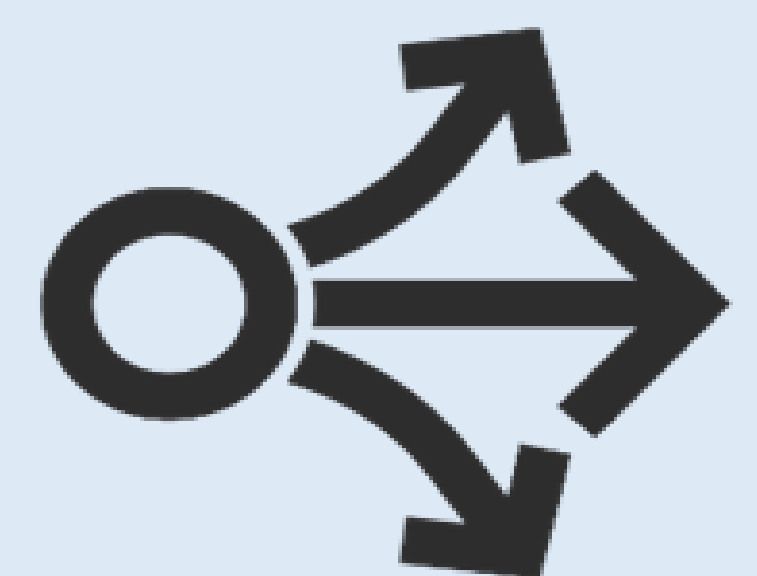
Wide flammability range
(Easy combustion)



Low ignition energy
(Easy ignition)



Reactivity of hydrogen
(Embrittlement of steel)



Diffusivity
(Gasket design)

Standards and Codes

ISO: 14687 (30.60)
Hydrogen fuel quality

ISO: 19880 Hydrogen (g)
fueling station

ISO: 19884-2 Cylinders (1,2,3)
and tubes for storage

