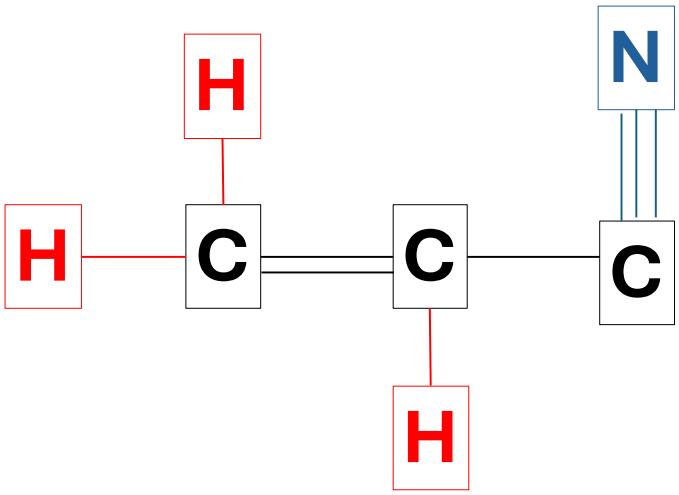
Chemical of the Week – Part 2

Hazard Profile	
Chemical Name and Pseudonyms	Acrylonitrile, acrylonitrile monomer,AN, Cyanoethylene, Propenenitrile, 2-Propenitrile, VCN, Vinyl cyanide, 107-13-1, Propenitrile,
UN Number	1093
Chemical Formula	CH_2=CHCN
NFPA Hazard Class (H-F-R-O)	4 – 3 – 2 –
Hazards	Toxic by all routes, flammable liquid, polymerization potential (shipped stabilized), carcinogen
PPE Considerations	CPC with flash protection or SFPC with SCBA based on assignment
Fire Fighting Considerations	ATC AFFF, water fog, dry chem, CO_2
Decontamination	Water with surfactant, hybrid, forced air for vapor exposure
Detection and Monitoring	Colormetric, PID IP = 10.91 ev, spectroscopy, combustible gas indicator/4-gas meter, chemical sensor
Chemical and Physical Properties	
Physical State	Colorless to pale yellow liquid with unpleasant odor (odor can only be detected above PEL)
Vapor Pressure	83 mm/Hg
Boiling Point	171°F
Vapor Density	1.9
Specific Gravity	.81
Miscibility/Solubility	7%
Flash Point	30°F
LEL/UEL	3% / 17%
Autoignition Temp	898°F
pH	-
Toxicity	
IDLH	65 ppm (Ca)
AEGL1/AEGL 2/AEGL 3 – 10 Min	1.5 / 1.5 / NR ppm
Protective Action Criteria (PAC) 1/2/3	.15 / 1.7 / 28 ppm (LEL = 3000 ppm)
Emergency Response Planning Guides (ERPG)	10 / 35 / 75 ppm

PEL/REL/STEL	2 / 1 /2 ppm (conversion 1 ppm = 2.17 mg/kg)
LD50	193 mg/kg (oral) **OR** 200 mg/kg (dermal)
LC50	.47 mg/l
Radioactive (Yes/No)	No
Medical	
Toxicological Considerations	Toxic by all routes
Signs/Symptoms of Exposure	Respiratory s/s, dizziness, nausea, skin/eye irritation, deep/rapid breathing
Medical Treatment	Fresh air, water flush, treat symptomatically, use of cyanide antidote kit
Other Information	
Incompatible/reacts with water, oxidizers, acids, bases, amines, bromine	
Chemical Structure