Chemical of the Week – Part 2

Hazard Profile	
Chemical Name and Pseudonyms	Aluminum phosphide, Phostoxin, Fumitoxin, Aluminum monophosphide
UN Number	1397
Chemical Formula	AlP
Hazards	Unstable, toxic, flammable, water reactive
NFPA Hazard Class (H-F-R-Ⓞ)	4 – 4 – 2 – W
PPE Considerations	CPC or SFPC with SCBA based on assignment
Fire Fighting Considerations	CO_2, Dry chemical
Decontamination	Ventilation, brushing, vacuuming, taping, flushing water
Detection and Monitoring	Colorimetric (silver nitrate), wet chemistry
Chemical and Physical Properties	
Physical State	Gray to light green solid or dust
Vapor Pressure	-
Boiling Point	Decomposes before boiling
Vapor Density	-
Specific Gravity	2.85
Miscibility	Reacts with water to form phosphine
Flash Point	-
LEL/UEL	- / -%
Autoignition Temp	-
pH	-
Toxicity	
IDLH	-
LC50	15.5 mg/cu m/4 hr (rat)
LD50	20 mg/kg
AEGL1/AEGL 2/AEGL (10 Min)	NR/ 4 /7.2 ppm
Emergency Response Planning Guide (ERPG) 1/2/3	- / - / -
Protective Action Criteria (PAC) 1/2/3	1.3 / 2 / 3.6 ppm
PEL/REL/STEL	- /- / - ppm
Radioactive (Yes/No)	No
Medical	
Toxicological Considerations	Toxic inhalation by inhalation, ingestion, and contact
Signs/Symptoms of Exposure	Sore throat, cough, SOB, dizziness, N & V
Medical Treatment	Fresh air, water flush, treat symptomatically

Other Information
Decomposed by water, moist air, or acids, releasing phosphine slowly, a toxic gas that often ignites. Avoid water, dilute mineral acids, dilute or concentrated hydrochloric acid. Heating produces highly toxic fumes of phosphorus oxides. Can react vigorously upon contact with oxidizing agents.
Chemical Structure