

Target Compound



CAS #

Conversion Formula RQ IE (eV)

Worker Safety

PEL (OSHA)	1 mg/m ³
REL (NIOSH)	1 mg/m ³
TLV (ACGIH)	1 mg/m ³
IDLH	1,000 mg/m ³
STEL	3 mg/m ³

Public Safety

AEGL-1 10 min	No AEGL information available.
AEGL-1 30 min	No AEGL information available.
AEGL-1 60 min	No AEGL information available.
AEGL-1 4 hr	No AEGL information available.
AEGL-1 8 hr	No AEGL information available.
AEGL-2 (Irreversible health effects, 60 min)	No AEGL information available.
AEGL-3 (Life threatening health effects, 60 min)	No AEGL information available.
PAL-1	No PAL information available.
PAC-1	3 mg/m ³
ERPG-1	3 mg/m ³
TX AMCV (ppm)	-
ATSDR MRL (1-14 days)	-
Odor Threshold Values (ppm)	-

Sampling

Air Sampling Method	NIOSH Method 7908
Holding Time	7 days @ 20 °C; or 28 days at 4 °C
Air Sampling Media	37-mm quartz fiber filter in acid-resistant cassette (SKC part # 225-9033)
Flow Rate	1-5 L/min
Sample Volume	15-2,000 L

Abbreviations:

PEL: Permissible Exposure Limit REL: Recommended Exposure Level TLV: Threshold Limit Value IDLH: Immediately Dangerous to Life and Health STEL: Short Term Exposure Limit RQ: Reportable Quantity AEGL: Acute Exposure Guideline Levels - AEGL-1: General population could experience notable discomfort or certain asymptomatic effects. The effects are reversible upon cessation of exposure. - AEGL-2: General population could experience irreversible or adverse health effects or an impaired ability to escape. - AEGL-3: General population could experience life-threatening health effects or death. @: releases less than 1000 pounds per 24 hours to the air resulting from combustion are exempt from notification †: Considered hazardous, but no RQ assigned IE = Ionization Energy N/A = Not Available ‡ Indicates that odor should be detectable near ERPG-1 and the ERPG-1 value was used.	PAL-1: Professional Advisory Level PAC-1: Protective Action Criteria ERPG-1: Emergency Response Planning Guide TX AMCV: TCEQ's Air Monitoring Comparison Values ATSDR MRL: Agency for Toxic Substances and Disease Registry Minimal Risk Levels C = Ceiling Ca = Potential Occupational Carcinogens
---	---

Target Compound Phosphoric Acid



Instrument	TUL START	DTX START	HTX START	BLA START	EPA Warehouse (Addison)	Resolution Detection Limit (ppm)	Detection Range	PID Lamp	Intrinsically Safe
pH Paper	Y	Y	Y	N	Y	Qualitative	Detects presence of acid	N/A	Y
Dräger X-ACT 5000 (Tubes) (AT)	N	N	N	Y	Y	Qualitative	Detects presence of acid	N/A	N
Dräger Accuro (Tubes) (AT)	N	N	N	N	Y	Qualitative	Detects presence of acid	N/A	Y

Notes: **PIDs such as MultiRAE Pro, AreaRAE Pro, TVA 2020, FIDs such as TVA 2020, and particulate monitors such as the PDR 1500, TSI DustTrak, or other instruments do not speciate between specific compounds.

Abbreviations: CS: Compound Specific sensors or tubes; PH: Petroleum Hydrocarbons sensors or tubes; AT: Acid Test sensors or tubes CF: Correction Factor

PID: Photoionization detector FID: Flame ionization detector ppm: part per million VOC: Volatile organic compounds eV: electron volt

LEL: Lower explosive limit $\mu\text{g}/\text{m}^3$ = milligrams per cubic meter $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter PDR: Personal dataRAM

Note: If using an instrument from the EPA Warehouse, call ahead to verify availability.

Phased Air Monitoring Tiers (PATS)

Name of Substance: Phosphoric Acid

CAS ID #: 7664-38-2



<u>3</u> mg/m ³ 1-hr TWA	MAXIMUM 1-HR. EXPOSURE WITH TRANSIENT AND REVERSIBLE HEALTH EFFECTS [TEEL-1]
<u>3</u> mg/m ³ 1-hr TWA	MAXIMUM 1-HR. EXPOSURE WITH MILD AND TRANSIENT HEALTH EFFECTS [ERPG-1]
<u>N/A</u> mg/m ³ 8-hr TWA	MAXIMUM AIRBORNE EXPOSURE WITH TRANSIENT AND REVERSIBLE HEALTH EFFECTS [AEG1-1]
_____	LOCAL GOVERNMENT ACTION LEVEL (IF APPLICABLE)
_____	UC ACTION LEVEL CONFIRM NOTIFY LOCAL GOVERNMENT
<u>N/A</u> mg/m ³	TX INSTANTANEOUS COMPARISON VALUE (3X THE AMCV IS AN INSTANTANEOUS READING, IF READINGS ARE ABOVE THE INSTANTANEOUS READING, CONDUCT A 1-HR TWA)
<u>N/A</u>	EQUIPMENT DETECTION LIMIT Lowest level per detection equipment Equipment: pH Paper
<u>N/A</u> ppm	Odor Threshold (ppm)

Last Updated: 9/30/2025

* Indicates the chemical is a possible carcinogen.

** PIDs such as MultiRAE Pro, AreaRAE Pro, TVA 2020, FIDs such as TVA 2020, particulate monitors such as the PDR 1500, TSI DustTrak, or other instruments that do not speciate between specific compounds.

NOTE: For the 10-min, 1-hr, and 4-hr AGELs refer to the Emergency Response Air Monitoring Guide Table.

NOTE: The values above are compiled from various sources, which update at varying frequencies. This plan should be reviewed annually, and its associated values will be updated accordingly. Users of this plan should always verify the values listed are the most current values listed in the originating source.

TWA - Time Weighted Average TEEL - Temporary Emergency Exposure Limit