

V&P SCIENTIFIC, INC.

INSTRUCTIONS FOR CLEANING REPLICATOR PINS WITH VP 110A PIN CLEANING SOLUTION

Prepare 1:5 dilution of VP 110A Pin Cleaning Solution:

1. 30 ml VP 110A Pin Cleaning Solution and 120 ml distilled H₂O (dH₂O)*.
2. Mix well. Store in covered dish (e.g., VP 420) at room temperature for multiple uses. Replace the VP 110A with a fresh dilution after 2 months or if a precipitate is seen in the bottom of the container.

Clean Pins:

1. Dip Replicator pins into 1:5 VP 110A Pin Cleaning Solution to approximately ½ pin length or the depth the pins will be submerged in the sample plates.
Move pin tips up and down through the meniscus 3X to ensure the even cleaning of pins
2. If cleaning slot pins, visually inspect slots for air bubbles.
Repeat Step 1 if air bubbles are seen in slots
3. Blot onto VP 522 Lint-Free Blotting Paper.
4. Repeat Steps 1-3 1X.
5. Set up two dH₂O* reservoirs and a 99% isopropanol reservoir (e.g., in pipette tip lid boxes).
6. Dip Replicator pins into first dH₂O reservoir.
Move pin tips up and down through the meniscus 3X
7. Blot onto VP 522 Lint-Free Blotting Paper.
8. Repeat Steps 6-7 through remaining dH₂O reservoir.
9. Dip Replicator pins into the isopropanol reservoir.
Move pin tips up and down through the meniscus 3X
10. Blot onto VP 522 Lint-Free Blotting Paper.
11. Air dry or use hot air dryer to dry pins. Replicator pins are now ready for use.

CAUTION --- The VP 110A Pin Cleaning Solution contains a dilute acid that can strip the protective anodized surface off the black anodized aluminum Replicator bases or Pin Tool float plates. If the VP 110A Pin Cleaning Solution comes in contact with an anodized surface, quickly rinse it off with water. Most current Replicator bases or Pin Tool float plates are now protected by a Ni-Lube coating that is not damaged by acid solutions.

*Always use distilled H₂O and not deionized H₂O in all Replicator and Pin Tool applications. Long term exposure to deionized H₂O will damage the stainless-steel pins.

VP 110A

1. Product and Company Identification

Product Code: VP 110A
Product Name: Pin Cleaning Solution
Company Name: V&P Scientific, Inc. **Phone Number:** (858) 455-0643
9823 Pacific Heights Blvd.
Suite T San Diego, CA
Web site address: 92121 <http://www.vp-sci.com>
Emergency Contact: (858) 455-0643
John Chavez
Recommended Use: I Cleaning Stainless Steel Pins

2. Hazards Identification

Skin Corrosion/Irritation, Category 1B

Acute Toxicity: Inhalation, Category 5

Acute Toxicity: Oral, Category 4

Acute Toxicity: Skin, Category 4

Serious Eye Damage/Eye Irritation, Category 2



GHS Signal Word: **Danger**

GHS Hazard Phrases: Causes severe skin burns and eye damage.
May be harmful if inhaled.
Harmful if swallowed.
Harmful in contact with skin.
Causes serious eye irritation.

GHS Precaution Phrases: Wash hands thoroughly after handling.
Keep out of reach of children.
Wear protective gloves, protective clothing, eye protection, face protection.
Do not eat, drink or smoke when using this product.
Take off contaminated clothing and wash it before reuse.

GHS Response Phrases: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Call a POISON CENTER or doctor if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If on skin (or in hair): Wash with plenty of soap and water.
If skin irritation or rash occurs, seek medical attention.

GHS Storage and Disposal Phrases: Dispose of contents and container according to the local, city, state and federal regulations.
Store in cool dry place at room temperature away from direct sunlight.

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Potential Health Effects

(Acute and Chronic):

Causes chemical burns to the respiratory tract. Avoid breathing vapors or mists.

Inhalation:

Corrosive, causes permanent skin damage (scarring). Avoid any skin contact.

Skin Contact:

Corrosive to the eyes and may cause severe damage including blindness. Avoid any eye contact.

Eye Contact:

Corrosive and may cause severe and permanent damage to mouth, throat, and stomach.

Ingestion:

May be fatal if swallowed.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
7664-38-2	Phosphoric acid	Proprietary

4. First Aid Measures

Emergency and First Aid

Procedures:

In Case of Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If unconscious, call a physician.

In Case of Skin Contact:

Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

In Case of Eye Contact:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

In Case of Ingestion:

If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Do NOT induce vomiting. Get medical aid immediately.

Note to Physician:

Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: NE

Explosive Limits: LEL: N/A N.E. UEL: N/A N.E.

Autoignition Pt: NE

Suitable Extinguishing Media: CO₂, dry foam, water.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.

Flammable Properties and Hazards: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Do not let this chemical enter the environment.

7. Handling and Storage

Precautions To Be Taken in Handling:

Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Wash hands thoroughly after handling.

Precautions To Be Taken in Storing:

Store in a cool, dry, well-ventilated area away from incompatible substances.

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8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7664-38-2	Phosphoric acid	PEL: 1 mg/m3	TLV: 1 mg/m3 STEL: 3 mg/m3	No data.

Respiratory Equipment (Specify Type):	Always use a NIOSH approved respirator when necessary.
Eye Protection:	Safety glasses.
Protective Gloves:	Wear appropriate protective gloves to prevent skin exposure.
Other Protective Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	Use adequate ventilation to keep airborne concentrations low.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance and Odor:	Blue color liquid with mint fragrance.
Melting Point:	NE
Boiling Point:	>= 212.00 F
Decomposition Temperature:	NE
Autoignition Pt:	NE
Flash Pt:	NE
Explosive Limits:	LEL: N/A N.E. UEL: N/A N.E.
Specific Gravity (Water = 1):	1.090
Density:	~ 9.10 lbs/gal
Bulk density:	NE
Vapor Pressure (vs. Air or mm Hg):	NE
Vapor Density (vs. Air = 1):	NE
Evaporation Rate:	NE
Solubility in Water:	100%
Saturated Vapor Concentration:	NE
Viscosity:	>=300 cps
pH:	0.5 - 2.0
Percent Volatile:	No data.
VOC / Volume:	0.0000 G/L
Particle Size:	NE
Heat Value:	NE
Corrosion Rate:	NE

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10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability: Incompatible materials, Metals. Excess heat.

Incompatibility - Materials To Avoid: Strong oxidizers, ammonia, chlorine, strong alkali materials, aluminum.

Hazardous Decomposition Or Byproducts: CO, CO2.

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Reactions: None.

11. Toxicological Information

Toxicological Information: No data available.

Carcinogenicity/Other Information: CAS# 7664-38-2: Acute toxicity, LD50, Oral, Rat, 1530. MG/KG. Results: [Beha (missing text!)] [Chan (missing text!)] [in (missing text!)] [psyc (missing text!)] [test (missing text!)] ; BIOFAX Industrial Bio-Test Laboratories, Inc., Data Sheets., Vol/p/yr: 17-4, 1970

Carcinogenicity: CAS# 7664-38-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65. NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Results of PBT and vPvB assessment: No data available.

CAS# 7664-38-2: Not reported., Rainbow Trout (*Oncorhynchus mykiss*), fingerling, 5.190 %, 27 W, Growth, Water temperature: 16.00 C - 20.00 C C. Results: Morphological changes. - Effect of Various Types of Phosphates on Zinc Availability to Rainbow Trout, Satoh, S., N. Porn-Ngam, T. Takeuchi, and T. Watanabe, 1993

13. Disposal Considerations

Waste Disposal Method: Dispose of contents and container according to the local, city, state and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Quart and one gallon: Limited Quantity.
Five Gallons or Higher: UN1760, Corrosive Liquids, n.o.s., (Contains Phosphoric Acid), 8, III. ()

DOT Hazard Class: 8 CORROSIVE

UN/NA Number: UN1760

Packing Group: III



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LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: UN1760, Corrosive Liquids, n.o.s., (Contains Phosphoric Acid), 8, III.

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: UN1760, Corrosive Liquids, n.o.s., (Contains Phosphoric Acid), 8, III.

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: UN1760, Corrosive Liquids, n.o.s., (Contains Phosphoric Acid), 8, III.

15. Regulatory Information

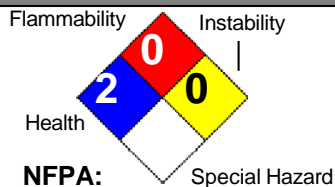
CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7664-38-2	Phosphoric acid	CA PROP.65: No; CA TAC, Title 8: TAC, Title 8

16. Other Information

Hazard Rating System:

HEALTH	2
FLAMMABILITY	0
PHYSICAL	0
PPE	C

HMIS:



Revision Date: 04/23/2015

Additional Information About No data available.

This Product:

Company Policy or

Disclaimer:

The manufacturer believes the data set forth are accurate and makes no warranty with respects thereto and disclaims all liability for reliance thereon. Such data are offered solely for consideration, investigation and verification. Also, the data set forth is for the concentrated finished product. All lab samples are for experimental purposes only and used at the customers discretion.