1 Identification

- **Product identifier:** ABICLEANER ALL IN ONE
- **Trade name:** ABICLEANER ALL IN ONE
- **Item number(s):** 192.0369 192.0378
- **Application of the substance / the mixture:** Commercial Use Only! – Cleaning electrolyte for use with ABICLEANER.
- **Manufacturer/Supplier:**
  ABICOR Binzel USA
  650 Medimmune Ct., Suite 110
  Frederick, MD 21703
  Tel: (800) 542-4867
  Fax: (301) 846-4197
- **Website:**
  https://www.binzel-abicor.com/
- **Emergency Telephone Number:**
  Poison Control Centers: 800-222-1222
  Canada Only: Canutec (Call Collect) (613) 996-6666

2 Hazard(s) Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 OSHA Hazard Communication Standard & WHMIS

Metal Corrosive 1: H290 May be corrosive to metals.
Acute Toxicity 4: H302 Harmful if swallowed.
Skin Corrosive 1B: H314 Causes severe skin burns and eye damage.
Eye Damage 1: H318 Causes serious eye damage.

2.2 Label elements




Hazard pictograms: GHS05 GHS07

Signal word: Danger

Hazard-determining components of labelling: phosphoric acid

Hazard statements:

H290: May be corrosive to metals.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.

Precautionary statements:

P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P303+P361+P353 IF ON SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin/hair with water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

- Results of PBT: Not applicable.
- vPvB assessment: Not applicable.

3 Composition/Information on Ingredients.

Hazardous Ingredients: Mixture of the following ingredients.

Components:			
CAS: 7664-38-2	Phosphoric acid	Acute Tox. 3, H301; Met. Corr.1, H290; Skin Corr. 1B, H314 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 25 % Skin Irritant 2; H315: 10 % ≤ C < 25 % Eye Irritant 2; H319: 10 % ≤ C < 25 %	50-100%

Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First-Aid Measures

4.1 General information:

- Immediately remove any clothing soiled by the product.
- Do not leave affected persons unattended.
- Use Personal Protection Equipment for First Aid persons.
- Take affected persons out of danger area and lay down.

After Inhalation:

- Seek immediate medical advice.
- In case of unconsciousness; place person firmly laying in a **side** position, call for medical transportation!
- Supply fresh air, consult a doctor/physician if the person(s) feels unwell.

After Skin Contact:

- Immediate medical treatment necessary, failure to treat burns can prevent wounds from healing.
- Immediately wash with water and soap and rinse thoroughly.
- If skin irritation occurs or in case of complaints, get medical attention.

After Eye Contact:

- Flush immediately! Call a doctor.
- Flush opened eye cautiously for several minutes under running water. Protect unharmed eye. If eye irritation/symptoms persist get medical attention.

After Swallowing:

- Immediately seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed:

- No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed:

- No further relevant information available.

5 Fire Fighting Measures

5.1 Suitable extinguishing media:

- CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.
- For safety reasons unsuitable extinguishing agents: DO NOT USE WATER WITH FULL JET

5.2 Special hazards arising from the substance or mixture:

- Formation of toxic gases is possible during heating or in case of fire.
- Carbon monoxide (CO)
- Nitrogen oxides (NOx)

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5.3 Advice for firefighters
Protective equipment:
- Wear self-contained respiratory protective device.
- Wear fully protective suit.
- Do not inhale explosion gases or combustion gases.

5.4 Additional information:
- Collect contaminated firefighting water separately. It must not enter the sewage system.
- Suppress (knock down) gases/vapors/mists with a water spray jet.
- Cool endangered receptacles with water spray.
- Dispose of fire debris and contaminated firefighting water in accordance with official regulations.



NFPA SCALE (0-4)

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:
- Do not breathe vapors.
- Ensure adequate ventilation.
- Keep unprotected persons away.
- Avoid substance contact.
- Wear protective equipment.
- Mount respiratory protective device. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions:
- Do not allow to enter sewers, surface or ground waters.
- Prevent from spreading by e.g., by damming-in or oil barriers.
- Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:
- Cover drains.
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Use neutralizing agent.
- Dispose of contaminated material as waste according to **Section 13**.

6.4 Reference to other Sections:
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and Storage

7.1 Precautions for safe handling:

- Store in cool, dry place in tightly closed receptacles.
- Ensure good ventilation and exhaust with fresh outside air at the workplace.
- Do not use metal containers for storage!
- Open and handle receptacle with care.

Information about protection against explosions and fires:

- Keep respiratory protective device available.

7.2 Storage requirements to be met by storage areas and receptacles including any incompatibilities:

- Provide acid-resistant floor.
- Store only in the original receptacle.
- Store in a cool location.
- Prevent any seepage into the ground.

Information about storage in one common storage facility:

- Store away from foodstuffs.
- Do not store together with alkalis (caustic solutions).

Further information about storage conditions:

- Store in cool and dry conditions. Heat will increase pressure and may lead to the receptacle busting.
- Keep container tightly sealed.
- Recommended storage temperature: 40-86 °F (5-30 °C).

Storage class: 8 B Non-combustible, corrosive hazardous materials.

7.3 Specific end use(s):

No further relevant information available.

8 Exposure Controls and Personal Protection

8.1 Control parameters **Ingredients with limit values that require monitoring at the workplace:**	
7664-38-2 phosphoric acid	
TLV (Canada) STEL	1 mg/m³* 3 mg/m³* (STEL = Short-term Exposure Limit)
PEL (USA-except California)	1 mg/m³* Permissible Exposure Limit - 8-hr Time Weighted Average (TWA) (CFR 29 1910.1000 Table Z-1)
California; Chronic Inhalation REL	7 mg/m³*; oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary Respiratory System
California; PEL	1 mg/m³* Permissible Exposure Limit (Title 8, Article 107) *Milligrams of substance per cubic meter of air.
Additional information:	The lists that were valid during the creation were used as basis.

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Continued from Page 4.

8.2 Exposure controls

Appropriate engineering controls:

- No further data; see section 7 above.

General protective and hygienic measures:

- The usual precautionary measures are to be adhered to when handling chemicals.
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

Individual protection measures, Personal Protective Equipment (PPE)

Respiratory protection:

- In case of brief exposure or low pollution use respiratory protection filter device. In case of intensive or longer exposure use self-contained respiratory protective device. Not necessary if room is well-ventilated.
- Use suitable respiratory protective device in case of insufficient ventilation.
- Wear suitable respirators during spray applications. (Filter B)

Hand protection

Protective gloves:

- Inspect protective gloves prior to each use for their proper condition.
- Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.
- Selection of the glove material on consideration of the penetration times, rates of diffusion & the degradation.
- After use of gloves, wash hands with soap and water.

Material of gloves

Recommended materials:

- Nitrile rubber, NBR.
- Penetration time (min.): < 480
- Recommended thickness of the material: ≥ 20 mil (0.5 mm)
- The glove material has to be impermeable & resistant to the product/ the substance/ the preparation.
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Only use chemical-protective gloves. In the EU, CE-labelling of category III.

Penetration time of glove material

- The determined penetration times are not performed under practical conditions. Therefore, a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

Eye/face protection: 

- Tightly sealed goggles.

Body Protection:

- Acid resistant protective clothing.

9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties
General information:
Physical State: Fluid.
Color: Colorless.
Odor: Not determined.
Odor threshold: Not determined.
Flammability: Not applicable.

pH-value at 68 °F /20 °C: <1

Change in condition
- **Melting point/Freezing point:** 0°F / -18 °C
- **Boiling point/Boiling range:** 275°F / 135 °C

Flash point: Not applicable.

Explosion limit:
- **Lower:** Not determined.
- **Upper:** Not determined.

- **Ignition temperature:** Not determined.

Decomposition temperature: Not determined.

Auto igniting: Product is not self-igniting.

Danger of explosion:
- Product does not present an explosion hazard.

Density and/or relative density
Density at 68°F / 20°C: 1.58 g/cm³
Relative density: Not determined.
Vapor density at 68°F / 20°C: Not determined.
Evaporation rate: Not determined.

Viscosity:
- **Kinematic viscosity:** At 104°F / 40°C 17.8 mm²/s
- **Dynamic:** 68°F / 20°C: 41.2 mPas

Solubility
- **Water:** Fully miscible.

Partition coefficient n-octanol/water (log value): Not determined.

9.2 Other information
Information with regard to physical hazard classes:
- Explosives: Void
- Flammable gases: Void
- Aerosols: Void
- Oxidizing gases: Void
- Gases under pressure: Void
- Flammable liquids: Void
- Flammable solids: Void
- Self-reactive substances and mixtures: Void
- Pyrophoric liquids: Void
- Pyrophoric solids: Void
- Self-heating substances and mixtures: Void
- Substances and mixtures, which emit flammable gases in contact with water: Void
- Oxidizing liquids: Void
- Oxidizing solids: Void
- Organic peroxides: Void
- **Corrosive to metals:** May be corrosive to metals.
- Desensitized explosives: Void

10 Stability and Reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical stability

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions:

- Forms hydrogen in aqueous solution with metals.
- Exothermic reaction.
- Heating occurs when water is added.
- When diluting, always add acid to water, never vice versa.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: Strong bases.

10.6 Hazardous decomposition products:

- Hydrogen
- Phosphorous oxides (e.g., P205)

11 Toxicological information

11.1 Information on toxicological effects:

- **Acute toxicity: Harmful if swallowed.**

LD/LC50 values that are relevant for classification:		
7664-38-2 phosphoric acid		
Oral	LD50	200 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalation	**LC50**	>850mg/m^3 (rat 1hr)

- **Skin corrosion/irritation:** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation:** Causes serious eye damage.
- **Respiratory or skin sensitization:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data; the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data; the classification criteria are not met.
- **STOT-single exposure:** Contact can irritate and burn the eyes. Breathing Phosphoric Acid can irritate the nose and throat causing coughing and wheezing.
- **STOT-repeated exposure:** Repeated exposure may cause bronchitis to develop with cough, phlegm, and/or shortness of breath. Long-term exposure to the liquid may cause drying and cracking of the skin. Long term exposure can irritate the lungs.
- **Aspiration hazard:** No data available.

11.2 Information on other hazards

Endocrine disrupting properties: None of the ingredients is listed.

12 Ecological information

12.1 Toxicity

Aquatic toxicity:	
7664-38-2 phosphoric acid	
ErC50	>100 mg/l (DESMODESMUS SUBSPICATUS) (72h; OECD 201)
EC50	>100 mg/l (Daphnia magna) (48h, OECD 202)

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12.2 Persistence and degradability:
- Inorganic product, is not eliminable from water by means of biological cleaning processes.

12.3 Bioaccumulative potential:
- No further relevant information available.

12.4 Mobility in soil:
- No further relevant information available.

12.5 Results of PBT and vPvB assessment:
- PBT: Not applicable.
- vPvB: Not applicable.

12.6 Endocrine disrupting properties:
- The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects - Additional ecological information:

General notes:
- Must not reach sewage water or drainage ditch undiluted or un-neutralized.
- Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
- Rinsing off of larger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value **harms** aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water dangerous.

13 Disposal Considerations

7664-38-2 phosphoric acid

13.1 Waste treatment methods:

Recommendation:
- Must not be disposed together with household garbage.
- Do not allow product to reach sewage system.
- Dispose of according to official regulations.

Uncleaned packaging:
- Place in a sealed container and label as waste. Place in a safe area, and comply with all federal, state, provincial and local regulations for disposal.

14 Transport information

14.1 UN number or ID number
DOT/TDG, ADR, IMDG, IATA: UN1805

14.2 Proper shipping name
- **DOT/TDG:** PHOSPHORIC ACID SOLUTION
- **ADR:** 1805 PHOSPHORIC ACID, SOLUTION
- **IMDG:** PHOSPHORIC ACID, SOLUTION
- **IATA:** PHOSPHORIC ACID, SOLUTION

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14.3 Transport hazard class(es)
DOT/TDG (Transport dangerous goods):



- UN number: 1805
- Class: 8 Packing group: III
- Proper shipping name: Phosphoric acid solution
- Reportable Quantity (RQ): Phosphoric acid 5000 pounds (2270 kg)
- Poison Inhalation Hazard: No

ADR



- **Class:** 8 (C1) Corrosive substances.
- **Label:** 8

IMDG, IATA



- **Class:** 8 Corrosive substances.
- **Label:** 8

14.4 Packing group
DOT/TDG, ADR, IMDG, IATA: III

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user; Warning: Corrosive substances.
Hazard identification number (Kemler code): 80
EMS Number: F-A, S-B
Segregation groups: (SGG1) Acids
Stowage Code: A
Segregation Code:
SG36 Stow "separated from" SGG18-alkalis
SG49 Stow "separated from" SGG6-cyanides

14.7 Maritime transport in bulk according to IMO instruments: Not applicable.

Transport/Additional information:
ADR
Limited quantities (LQ): 5L
Excepted quantities (EQ): Code E1 Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
Transport category: 3
Tunnel restriction code: E

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IMDG
Limited quantities (LQ): 5L
Excepted quantities (EQ): Code E1 Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation": UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA 302 Components:
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards:
Acute Health Hazard.

SARA Section 313 Components:
This material does not contain any chemical components with known CAS numbers that exceed the threshold.

RCRA (hazardous waste code):
None of the ingredients is listed

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65 California;
Chemicals known to cause cancer:
None of the ingredients listed.
Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Canadian substance listings
Canadian Domestic Substances List (DSL):
All of the ingredients are listed.
Canadian Ingredient Disclosure list (limit 0.1%):
None of the ingredients is listed.
Canadian Ingredient Disclosure list (limit 1%):
7664-38-2 Phosphoric acid

16 Other information

This SDS format meets Hazard Communication Standard (HCS) (29 CFR 1910.1200(g), GHS and WHMIS requirements. This sheet was compiled from the latest available information and reliable sources. Abicor Binzel USA, Inc. provides this information in good faith, but no warranties either expressed or implied and assumes no responsibility for the accuracy or completeness of the data herein. This document is specifically a guide to use the appropriate handling of this material by properly trained personnel. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although any hazards that are described herein, we cannot guarantee that these are the only hazards that exist. This information cannot be transferred to other products and without-certainty mixes of this product with other products.

Department issuing SDS: Safety department.
Contact: GY/MM
Date of preparation: 12/2/2022 **Last revision:** 09/8/2023

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ADR: European **A**greement Concerning the International Carriage of **D**angerous Goods by **R**oad
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
STOT SE: Specific target organ toxicity - Single Exposure to substance or mixture.
STOT RE: Specific target organ toxicity - Repeat Exposure to substance or mixture.

Relevant phrases:
Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Conclusion of SDS.