

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Name: Acid Etchant Gel, Acid Etchant Liquid
Common Name: Adhesives – Orthodontic Acid Etchant
Material: 37% Phosphoric Acid
Restrictions on Use: American Orthodontics' products are used for the treatment of malocclusions and craniofacial abnormalities as diagnosed by a trained dental professional or orthodontist. Federal law restricts this device to use by or on the order of a dentist or orthodontist.

EC No.: Information not available.

REACH Registration No.: Information not available.

CAS No. / IUPAC: 7664-38-2 (Phosphoric Acid)

1.2 Relevant Identified Uses/ Uses Advised Against

Relevant identified uses: Dental/Orthodontic use only
Uses advised against: Not for Consumer use. Please see "Restrictions on Use"

1.3 Details of the Supplier of the Safety Data Sheet

Company Name:
 American Orthodontics
 3524 Washington Avenue
 Sheboygan, WI 53081
 Phone: 920-457-5051
 Fax: 920-457-1485

E-mail: info@americanortho.com
National Contact: Safety Department

1.4 Emergency Telephone Number

Emergency Response Number:
 920-457-5051
 Only available during office hours: 8:00AM – 5:00PM (Central Time)
 Language of Phone Service: English

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]
 Skin Corr. 1B H314 Causes severe skin burns and eye damage.
 Eye Dam. 1 H318 Causes serious eye damage.

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard Pictogram(s)



GHS05 Corrosive

Signal Word(s): Danger

Hazard-determining components of labeling:

Phosphoric acid

Hazard Statements:

Causes severe skin burns and eye damage.

Precautionary Statements:

Do not breathe dusts or mists.

Wear eye protection / face protection.

Wash thoroughly after handling.

If on skin (or hair): Immediately take off all contaminated clothing. Rinse skin with water/ shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER / doctor.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Store locked up.

Dispose of contents / container in accordance with local / regional / national/ international regulations.

2.3 Other Hazards

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

NFPA Ratings (scale 0-4)

Health = 3

Fire = 0

Reactivity = 0

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient(s)</u>	<u>CAS No.</u>	<u>EC No.</u>	<u>Wt. % Content (or Range)</u>
Phosphoric acid	7664-38-2	N/A	25-50%

4. FIRST-AID MEASURES

4.1 Description of First-Aid Measures

General Notes

Avoid eye and skin contact with the substance. Immediately remove any clothing soiled by the product.

Inhalation

Supply fresh air; consult doctor in case of complaints.

Skin Contact

Immediately wash with water and soap and rinse thoroughly. Seek medical treatment.

Eye Contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

Ingestion/Swallowing

Rinse out mouth and then drink plenty of water. Do not induce vomiting; immediately

call for medical help.
Self-Protection of First-Aider
Wear eye protection / face protection. Avoid eye and skin contact with the substance.

4.2 Important Symptoms and Effects

No further relevant information available.

4.3 Medical Attention & Special Treatment Necessary

No further relevant information available.

5. FIRE AND EXPLOSION HAZARDS

5.1 Extinguishing Media

Suitable Extinguishing Media:

- Use firefighting measures that suit the environment. CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special Exposure Hazards from Substance/Mixture

Hazardous Combustion Products:

- Vapors of toxic phosphoroxides are developed during thermal decomposition.

5.3 Advice for Firefighters

Firefighting Methods:

- Wear self-contained respiratory protective device. Collect contaminated fire-fighting water separately. It must not enter the sewage system.

Special protective equipment for fire-fighters:

- Acid-resistant clothing. Wear self-contained respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment & Emergency Procedures

6.1.1 For Non-Emergency Personnel

Protective Equipment

- PVC gloves, Nitrile rubber (NBR), Neoprene gloves.

Emergency Procedure

- Wear protective equipment. Avoid eye and skin contact with the substance. Keep unprotected persons away.

6.1.2 For Emergency Responders

Wear protective equipment. Avoid eye and skin contact with the substance. Keep unprotected persons away.

6.2 Environmental Precautions

Dilute with plenty of water. Do not allow to enter sewers / surface or ground water.

6.3 Methods & Material for Containment & Cleaning Up

6.3.1 For Containment

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders,

sawdust). Use neutralizing agent.

6.3.2 For Cleaning Up

See containment above.

6.3.3 Other Information

Dispose contaminated material as waste according to Section 13.

6.4 Reference to other sections (as applicable)

Refer to Sections 7, 8, and 13 for Handling and Storage, Exposure Controls and Personal Protection, and Disposal Considerations.

7. HANDLING AND STORAGE

7.1 Precautions for Safe-Handling

Protective Measures:

Measures to prevent fire:

- This product is not flammable.

Measure to protect the environment

- Do not allow to enter sewers / surface or ground water.

Advice on General Occupational Hygiene:

Do not eat, drink, smoke or sniff while working. 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.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures & Storage Conditions

- Store between 10 °C and 25 °C (50 °F to 77 °F). Keep receptacles tightly sealed. Open and handle receptacle with care. Store receptacle in a well-ventilated area. Protect from frost.

Requirements for Storage Rooms & Vessels

- Do not use light alloy receptacles. Store away from oxidizing agents. Store between 10 °C and 25 °C (50 °F to 77 °F). Store receptacle in a well-ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Component	OSHA PELs (Permissible Exposure Limits)	OSHA RELs (Recommended Exposure Limits)	ACGIH TLVs (Threshold Limit Values)
7664-38-2 (Phosphoric Acid)	Long-term value: 1 mg/m ³	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³

8.2 Exposure Controls

8.2.1 Personal Protective Equipment

8.2.2.1 Eye & Face Protection

- Tightly sealed goggles.

8.2.2 Skin Protection

Hand Protection

- Acid resistant gloves. PVC gloves; Nitrile rubber, NBR; Neoprene gloves. Penetration time of glove material (0.1 – 0.2mm): 5 minutes.

Other Skin Protection

- Acid resistant protective clothing.

8.2.2.3 Respiratory Protection

- Not required.
- 8.2.2.4 Thermal Hazards**
- Heating occurs when water is added.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic Physical & Chemical Properties

Appearance:	Fluid, Green.
Odor:	Odorless.
Odor Threshold:	Not determined.
pH:	1.6 (at 20 °C (68 °F))
Melting Point/Freezing Point:	Undetermined.
Initial Boiling Point & Boiling Range:	100 °C (212 °F)
Flash Point:	Not applicable.
Evaporation Rate:	Not determined.
Flammability (solid, gas):	Not applicable.
Upper/Lower Flammability or Explosive Limits:	Not determined.
Vapor Pressure:	Not determined.
Vapor Density:	Not determined.
Relative Density:	1.27 g/cm ³ (10.598 lb/gal) @ 20 °C (68 °F)
Solubility(ies):	Fully miscible with water.
Partition Coefficient: n-octanol/water):	Not determined.
Auto-Ignition Temperature:	Product is not self-igniting.
Decomposition Temperature:	Not determined.
Viscosity:	550 mPas (dynamic at 20 °C (68 °F))
Explosive Property:	Product does not present an explosion hazard.
Oxidizing:	Information not available.

9.2 Other Information

No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information available.

10.2 Chemical Stability

No further relevant information available.

10.3 Conditions of Instability

See Possibility of Hazardous Reactions.

10.4 Possibility of Hazardous Reactions

Heating occurs when water is added. Reacts with alkali (lyes). Reacts with various metals.

10.5 Conditions to Avoid

No decomposition if used according to specifications.

10.6 Incompatible Materials

No further relevant information available.

10.7 Hazardous Decomposition Products

No dangerous decomposition products know.

10.8 Hazardous Polymerization

No further relevant information available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Information

Skin Corrosion

Strong caustic effect on skin and mucous membranes.

Serious Eye Damage/Irritation

Strong caustic effect. Strong irritant with the danger of severe eye injury.

Respiratory/Skin Sensitization

Strong caustic effect on skin and mucous membranes.

Carcinogenicity

None of the ingredients are listed per the IARC, NTP, or OSHA-Ca.

Other Potential Health Effects

The product shows the following dangers according to internally approved calculation methods for preparations.

11.1.1 Carcinogenic categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.
TLV (Threshold Limit Value established by ACGIH)
None of the ingredients are listed.
MAK (German Maximum Workplace Concentration)
None of the ingredients are listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

General notes:

Water hazard class 1 (self-assessment): slightly hazardous for water.
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 Must not reach bodies of water or drainage ditch undiluted or un-neutralized.
 Rinse of larger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In dilution at usage-level, the pH-value is considerably increased – after the use of the product, the aqueous waste emptied into drains is only low water-dangerous.

Acute (Short-Term) Toxicity:

Aquatic: No further relevant information available.

Chronic (Long-Term) Toxicity:

Aquatic: No further relevant information available.

- 12.2 Persistence and Degradability**
No further relevant information available.
- 12.3 Bio accumulative Potential**
No further relevant information available.
- 12.4 Mobility in Soil**
No further relevant information available.
- 12.5 Results of PBT and vPvB Assessment**
Not available.
- 12.6 Other Adverse Effects**
No further relevant information available.




13. DISPOSAL CONSIDERATIONS

- 13.1 Waste Treatment Methods**
 - 13.1.1 Product/Packaging disposal:**
Empty contaminated packaging thoroughly. Packaging can be recycled after thorough and proper cleaning. Small amounts may be diluted with plenty of water and washed away. Dispose of larger amounts in accordance with local authority requirements.
 - 13.1.2 Waste Treatment – relevant information:**
Small amounts may be diluted with plenty of water and washed away. Dispose of larger amounts in accordance with local authority requirements
 - 13.1.3 Sewage Disposal –relevant information:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 - 13.1.4 Other Disposal recommendations:**
None listed.

14. TRANSPORTATION INFORMATION

- 14.1 UN Number**
DOT, ADR, IMDG, IATA: UN1805
- 14.2 UN Proper Shipping Name**
 - DOT:** Phosphoric acid solution mixture
 - ADR:** 1805 Phosphoric acid solution mixture
 - IMDG:** PHOSPHORIC ACID, SOLUTION mixture
 - IATA:** PHOSPHORIC ACID, SOLUTION mixture

14.3 Transport Hazard Class(es)

	DOT	ADR	IMDG, IATA
Label Image			
Class	8 Corrosive substances	8 (C1) Corrosive substances	8 Corrosive substances
Label	8	8	8

- 14.4 Packing Group**
DOT, ADR, IMDG, IATA: III
- 14.5 Environmental Hazards**
Marine pollutant: No.

14.6 Special Precautions for User

Warning: Corrosive substances.

Danger code (Kemler): 80

EMS Number: F-A,S-B

Segregation groups: Acids

Stowage Category: A

14.7 Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

14.8 Additional Information

ADR:

Excepted quantities (EQ):

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

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 MIXTURE, 8, III

15. REGULATORY INFORMATION

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

SARA Section 355 (extremely hazardous substances)
None of the ingredients are listed.
SARA Section 313 (specific toxic chemical listings)
Phosphoric acid
TSCA (Toxic Substances Control Act)
Phosphoric acid
Water, distilled, conductivity or of similar purity
Prop 65 – Chemicals known to cause cancer
None of the ingredients are listed.

15.2 Chemical Safety Assessment:

No chemical safety assessment has been carried out for this substance/mixture by the supplier.

16. ADDITIONAL INFORMATION

16.1 Indication of changes/revision to SDS:

1. New format
2. Inclusion of EC Requirements
3. *Revision Date:* 10/30/2019

16.2 Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by

Road)
 IARC: International Agency for Research on Cancer
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 NFPA: National Fire Protection Association (USA)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Skin Corr. 1B: Skin corrosion / irritation – Category 1B
 Eye Dam.1: Serious eye damage / eye irritation – Category 1

16.3 Key literature references and sources for data

1. Guidance on the Compilation of Safety Data Sheets; European Chemical Agency (ECHA); Version 2.1, February 2014
2. Regulation (EC) No 1272/2008 of the European Parliament and the Council of 16 December 2008 on classification, labelling, and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

16.4 Classification and procedure used to derive classification for mixtures according to Regulation (EC) 1272/2008[CLP]:

None.

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in the SDS was obtained from sources that we believe are reliable and is believed to be valid and accurate. American Orthodontics, however, makes no warranty, express or implied, regarding its correctness of the information provided. The conditions or method of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. If the product is used as a component in another product or used in a way other than recommended by the Company, this SDS information may not be applicable. **Reasonable safety precautions must always be observed.**