

YOUNG™

DENTAL MANUFACTURING

SAFETY DATA SHEET

SECTION I: Identification

Product Identifier:

Product Name: Etching Gel
Part/Item Number: 370101, 370104

Recommended Use of the Substance or Mixture and Restrictions on Use:

Recommended Use: Used to prepare teeth for bonding procedures
Restrictions on Use: For professional use only

Details of the Supplier:

Manufactured by: Young Dental Manufacturing
13705 Shoreline Court East
Earth City, MO 63045
1.800.325.1881

Emergency Phone Number:

Infotrac:
24-Hour Number- (U.S.) 1-800-535-5053
Outside U.S.- 1-352-323-3500

SECTION II: Hazard(s) Identification

Classification of the Substance or Mixture:

Health Hazard	Physical Hazard
Skin Corrosion/Irritation Category 1 Serious Eye Damage/Eye Irritation Category 1	Corrosive to Metal Category 1 Flammable Liquids Category 2

Label Elements:

Hazard Symbol:



Signal Word: Danger

Hazard Statement(s):

May be corrosive to metals
Highly flammable liquid and vapor
Causes severe skin burns and eye damage
Causes serious eye damage

Precautionary Statement(s):**Prevention –**

Keep only in original container.
 Keep away from heat/sparks/open flames/hot surfaces.– No smoking.
 Keep container tightly closed.
 Ground/Bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/ lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe dusts or mists.
 Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.

Response –

Absorb spillage to prevent material damage.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 In case of fire: Use extinguishing media appropriate for surrounding materials to extinguish.
 If swallowed: Rinse mouth. Do NOT induce vomiting.
 Wash contaminated clothing before reuse.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 Immediately call a poison center/doctor.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage –

Store in corrosive resistant container with a resistant inner liner.
 Wear protective gloves/eye protection/face protection.
 Store in a well-ventilated place. Keep cool.
 Store locked up.

Disposal –

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

Other Hazards: Not applicable

SECTION III: Composition/Information on Ingredients**Mixture:**

Component	CAS #	WT%	Classification
Phosphoric Acid	7664-38-2	30-60%	Corrosive to Metals Category 1 Acute Oral Toxicity Category 4 Skin Corrosion/Irritation Category 1 Serious Eye Damage/Eye Irritation Category 1 Specific Target Organ Toxicity – Single Exposure Category 3
Ethyl Alcohol (200 Proof)	64-17-5	<10%	Flammable Liquids Category 2 Serious Eye Damage/Eye Irritation Category 2B Skin Corrosion/Irritation Category 2 Specific Target Organ Toxicity – Single Exposure Category 3

SECTION IV: First-Aid Measures**Description of First Aid Measures:**

Ingestion - Do not induce vomiting. Call a physician or poison control center immediately. If vomiting does occur, lean forward and keep head low to prevent aspiration.

Eye contact – If a patient or clinician experiences eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Contact a physician or poison control center.

Skin contact – Immediately flush affected area with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Contact a physician or poison control center.

Inhalation – Move person to fresh air. If signs/symptoms continue, seek medical attention. Give oxygen or artificial respiration as needed.

Most Important Symptoms and Effects, Acute and Delayed: Causes severe skin burns and eye damage.

Indication of Any Immediate Medical Attention and Special Treatment Needed: Treat symptomatically. Symptoms may be delayed.

SECTION V: Firefighting Measures

Extinguishing media: Use fire extinguishing media appropriate for surrounding materials. Product is highly acidic and flammable.

Special Hazards Arising from the Substance or Mixture:

Phosphoric Acid - Phosphoric acid decomposes in a fire to produce toxic gases.

Ethyl Alcohol - Carbon monoxide is an expected hazard due to ethyl alcohol contents. Ethyl alcohol may produce a floating fire hazard. Static ignition hazard can result from handling and use. Vapors may travel to source of ignition and flash back. Vapors may settle in low or confined spaces. Alcohols burn with a pale blue flame which may be extremely hard to see under normal lighting conditions. Personnel may only be able to feel the heat of the fire without seeing flames. Extreme caution must be exercised in fighting alcohol fires. Fight fire from maximum distance. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire.

Advice for Fire-Fighters:

Fire Fighting Procedures - Fight fire from a safe distance or protected location.

Precautions for Fire Fighters - Do not enter fire area without proper protection. Firefighters should wear full emergency equipment and an approved pressure self-contained breathing apparatus.

SECTION VI: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Do not inhale vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and Materials for Containment and Cleaning Up: Highly flammable liquid. Eliminate all sources of ignition. All equipment used when handling this product must be grounded. Do not touch or walk through spilled material. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations. Use clean non-sparking tools to collect absorbed material.

SECTION VII: Handling and Storage

Precautions for Safe Handling: Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not inhale. Wash hands thoroughly after handling. Do not eat or drink when using this product. Keep away from sources of ignition – no smoking. Take measure to avoid the buildup of electrostatic charge. Handle container with care.

Conditions for Safe Storage, Including Any Incompatibilities: Do not store in metal containers. Keep container tightly closed in a cool, dry, and well-ventilated place. Store product away from food and beverages. Consult local fire codes for additional storage information.

SECTION VIII: Exposure Controls/Personal Protection

Control Parameters:

Occupational Exposure Limits:		
Component	OSHA PEL	ACGIH TLV
Phosphoric Acid	1 mg/m ³ (TWA)	1 mg/m ³ (TWA), 3 mg/m ³ (STEL)
Ethyl Alcohol	1000 ppm (1900 mg/m ³) (TWA)	1000 ppm (1880 mg/m ³) (TWA)

Exposure Controls:**Appropriate Engineering Controls** – Not available

Individual Protection Measures (PPE) – Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Wear suitable protective clothing. Wash contaminated clothing before reuse. Wear protective safety glass with side shields or goggles and/or a face shield. Maintain eye wash fountain and quick-drench facilities in work area. Handle with chemical resistant gloves, and use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash hands thoroughly after use and before breaks. In case of inadequate ventilation, use suitable respirator and components tested and approved under appropriate government standards such as NIOSH.

SECTION IX: Physical and Chemical Properties

Information on Physical and Chemical Properties:	
Appearance:	Blue-green
Odor:	Acrid odor
Odor Threshold:	Not applicable
pH:	<1.5
Melting point/freezing point:	-35° C (-31 °F)
Initial boiling point and boiling range:	108° C (226 °F)
Flash point:	Not determined
Evaporation rate (Butyl Acetate =1):	Not determined
Flammability (solid, gas):	Not applicable
Upper/lower flammability or exposure limits:	Not determined
Vapor pressure:	Not determined
Vapor density (Air = 1):	3.4
Relative density:	Not determined
Solubilit(ies):	Soluble in water
Partition coefficient: n-octano/water	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Specific gravity (Water = 1):	1.25

SECTION X: Stability and Reactivity**Reactivity:** None known**Chemical Stability:** Stable**Possibility of hazardous reactions:** Vapors from ethyl alcohol may form explosive mixture with air.**Conditions to avoid:** Avoid heat, flames, and sparks. Avoid extreme temperatures and direct sunlight. Avoid contact with oxidizing agents, strong reducing agents, and alkalis.**Incompatible materials:** Avoid strong reducing agents, alkalis, strong oxidizing agents, metals, ammonia, peroxides, and strong inorganic acids.**Hazardous decomposition products:** Carbon oxides and oxides of phosphorus

SECTION XI: Toxicological Information

Potential Health Effects:

Ingestion –Phosphoric acid is harmful if swallowed. Ethyl alcohol may cause gastrointestinal irritation with nausea, vomiting, and diarrhea. Ingestion of ethyl alcohol may cause systemic toxicity and acidosis can occur. Advanced stages can lead to respiratory failure, kidney failure, coma, and death.

Eye Contact –Phosphoric acid causes severe skin burns. Ethyl alcohol causes irritation to the eyes. Eye contact with ethyl alcohol may cause painful sensitization to light. Ethyl alcohol may cause a form of chemical conjunctivitis and cause corneal damage.

Skin Contact – Phosphoric acid causes serious eye damage. Ethyl alcohol causes moderate skin irritation. Ethyl alcohol may cause dermatitis by de-fattening the skin from prolonged or repeated contact.

Inhalation – Phosphoric acid is severely irritating to the respiratory system. Ethyl alcohol causes respiratory tract irritation. Ethyl alcohol can cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation. Systemic toxicity and acidosis can occur. Advanced stages can lead to respiratory failure, kidney failure, coma, and death.

Acute Toxicity Data:

Phosphoric Acid – Oral: ATEMix (rat) 1,700 mg/kg; Dermal: ATEMix 3,044.44 mg/kg

Ethyl Alcohol – Oral: LC50 (rat) 7060 mg/kg, LDLo (human) 1400 mg/kg; Inhalation: LC50 20000 ppm

Carcinogenicity: OSHA, IARC, and NTP do not list phosphoric acid or ethyl alcohol as human carcinogens. Ethyl alcohol is tumorigenic (oral mouse). Tumors were found in liver and formation of lymphomas in blood.

SECTION XII: Ecological Information

Toxicity:

Phosphoric Acid - Not available

Ethyl Alcohol – Acute fish toxicity: LC 50 96 hour *Oncorhynchus mykiss* (rainbow trout) > 10,000 mg/l, LC50 96 hour *Pimephales promelas* (fathead minnow) > 13,400 mg/l; Toxicity to aquatic plants: Growth inhibition 96 hour *Chlorella vulgaris* (fresh water algae) 1,000 mg/l; Toxicity to microorganisms: Toxicity threshold *Pseudomonas putida* 6,500 mg/l, summary: inhibition of cell multiplication begins

Persistence and Degradability: Phosphoric acid and ethyl alcohol are expected to be biodegradable.

Bio-accumulative potential:

Phosphoric Acid - Not available

Ethyl Alcohol – Bioaccumulation is unlikely

Mobility in Soil:

Phosphoric Acid – Phosphoric acid is water soluble and may spread in water systems.

Ethyl Alcohol – Not available

Other Adverse Effects:

Phosphoric Acid – Phosphoric Acid may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

Ethyl Alcohol – Not available

SECTION XIII: Disposal Considerations

Dispose of in accordance with all Federal, State and Local regulations.

SECTION XIV: Transport Information

DOT:

Proper Shipping Name – Phosphoric acid, solution

Hazard Class – 8

UN Number – UN1805

Packing Group – III

Packaging - See 49 CFR 173.203 for authorized UN-specification non-bulk packages.

Marking and Labeling - Mark: Proper Shipping Name, UN Number, to or from address, orientation arrows on two opposing sides when shipped in a combination package. Label: Hazard Class label

Shipping Papers - Required, unless taking an exception (e.g. Limited Quantity)

Limited Quantity and Consumer Commodity Exception – See 49 CFR 173.154 to take a Limited Quantity or Consumer Commodity exception. Up to 5 L for inner packages, and no more than 30 kg gross weight per package. Combination package required. UN performance oriented packages not required. Mark with the Limited Quantity mark, and orientation arrows on two opposing sides. Consumer commodity exception authorized for materials meeting the definition of a Limited Quantity. Mark with ORM-D inside a rectangular border, and Consumer commodity.

Hazardous Substances (RQ) – Phosphoric acid is listed as a hazardous substance in 49 CFR 172.101 Appendix A, with a Reportable Quantity of 5,000 pounds per package. When shipped in quantities of at least 5,000 pounds per package mark RQ on shipping papers.

IATA/ICAO:

Proper Shipping Name – Phosphoric acid, solution

Hazard Class – 8

UN Number – UN1805

Packing Group – III

Marking and Labeling - Mark: Proper Shipping Name, UN Number, to and from address, orientation arrows on two opposing sides when shipped in a combination package. Label: Hazard Class labels, Cargo Aircraft Only Label (when shipped Cargo Aircraft Only)

Shippers Declaration for Dangerous Goods - Required

Limited Quantity Exception – See Packing Instruction Y841. Up to 0.5 L per inner package, and 1.0 L maximum net quantity per package. Combination package required with drop test from 1.2 m, and stacking test at 3 m for 24 hours. UN performance oriented packages not required. Mark with the Limited Quantity mark with a Y, Proper shipping name, Identification number, to and from address, orientation arrows on two opposing sides, and hazard class labels.

Consumer Commodity Exception – No consumer commodity exceptions are authorized.

Passenger Aircraft Limitation – See Packing Instruction 852. Up to 5.0 L maximum quantity per inner package (depending on the type of package chosen) and 5.0 L maximum net quantity per package. Single packagings are not permitted.

Cargo Aircraft Limitation - See Packing Instruction 856. Up to 10.0 L maximum quantity per inner package (depending on the type of package chosen) and 60.0 L maximum net quantity per package. Combination and single packagings are permitted.

Hazardous substances (RQ) – Phosphoric acid is listed as a hazardous substance in 49 CFR 172.101 Appendix A, with a Reportable Quantity of 5,000 pounds per package.

IMDG/IMO: Not determined

SECTION XV: Regulatory Information

Not available

SECTION XVI: Other Information

Supersedes: 26 March 2013

Date Revised: 16 July 2015

The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, Young Dental Manufacturing makes no recommendation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for particular purpose.

NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESSED OR IMPLIED OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.
