



## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M Unitek Etching Gel (704-060)

#### Product Identification Numbers

70-2021-7397-0

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Orthodontic use, Orthodontic use

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Oral Care Solutions Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

#### 2.1. Hazard classification

Corrosive to metal: Category 1.

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Corrosion |

**Pictograms**



**Hazard Statements**

May be corrosive to metals.

Causes severe skin burns and eye damage.

**Precautionary Statements**

**Prevention:**

Keep only in original container.

Wear protective gloves, protective clothing, and eye/face protection.

Wash thoroughly after handling.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately 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 or doctor/physician.

Wash contaminated clothing before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material damage.

**Storage:**

Store in a corrosive resistant container with a resistant inner liner.

**Disposal:**

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

**2.3. Hazards not otherwise classified**

May cause chemical gastrointestinal burns.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	55 - 65 Trade Secret *
PHOSPHORIC ACID	7664-38-2	30 - 40 Trade Secret *
AMORPHOUS SILICA	112945-52-5	5 - 10 Trade Secret *

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Inhalation:**

No need for first aid is anticipated.

**Skin Contact:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**Eye Contact:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If Swallowed:**

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures**

**5.1. Suitable extinguishing media**

Material will not burn. Use a fire fighting agent suitable for the surrounding fire. Non-combustible. Use a fire fighting agent suitable for surrounding fire.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

**Hazardous Decomposition or By-Products**

Substance

Carbon monoxide

Carbon dioxide

Condition

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Collect as much of the spilled material as possible. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue with water. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. Do not get in eyes. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard.

**7.2. Conditions for safe storage including any incompatibilities**

Store away from heat. Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. Store away from strong bases.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
SILICA, AMORPHOUS	112945-52-5	OSHA	TWA concentration:0.8 mg/m <sup>3</sup> ;TWA:20 millions of particles/cu. ft.	
PHOSPHORIC ACID	7664-38-2	ACGIH	TWA:1 mg/m <sup>3</sup> ;STEL:3 mg/m <sup>3</sup>	
PHOSPHORIC ACID	7664-38-2	OSHA	TWA:1 mg/m <sup>3</sup>	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

**8.2. Exposure controls****8.2.1. Engineering controls**

Use in a well-ventilated area.

**8.2.2. Personal protective equipment (PPE)****Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety Glasses with side shields

**Skin/hand protection**

See Section 7.1 for additional information on skin protection.

**Respiratory protection**

None required.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

General Physical Form: Liquid

<b>Specific Physical Form:</b>	Gel
<b>Odor, Color, Grade:</b>	Blue , Slight Characteristic Odor
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	1
<b>Melting point</b>	<i>No Data Available</i>
<b>Boiling Point</b>	>= 212 °F
<b>Flash Point</b>	No flash point
<b>Evaporation rate</b>	<i>Not Applicable</i>
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	<i>Not Applicable</i>
<b>Flammable Limits(UEL)</b>	<i>Not Applicable</i>
<b>Vapor Pressure</b>	<= 16 psi [ <i>Ref Std: AIR=1</i> ]
<b>Vapor Density</b>	<i>Not Applicable</i>
<b>Specific Gravity</b>	1.28 [ <i>Ref Std: WATER=1</i> ]
<b>Solubility in Water</b>	Complete
<b>Solubility- non-water</b>	<i>No Data Available</i>
<b>Partition coefficient: n-octanol/ water</b>	<i>No Data Available</i>
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity</b>	100,000 centipoise
<b>Volatile Organic Compounds</b>	<i>No Data Available</i>
<b>Percent volatile</b>	<i>Not Applicable</i>
<b>VOC Less H2O &amp; Exempt Solvents</b>	<i>No Data Available</i>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat

### 10.5. Incompatible materials

Strong bases

### 10.6. Hazardous decomposition products

**Substance**

None known.

**Condition**

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be

relevant to the material as a whole.

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### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

#### Inhalation:

This product may have a characteristic odor; however, no adverse health effects are anticipated.

#### Skin Contact:

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

#### Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

#### Ingestion:

May be harmful if swallowed.

Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

#### Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

#### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
PHOSPHORIC ACID	Dermal	Rabbit	LD50 2,740 mg/kg
PHOSPHORIC ACID	Ingestion	Rat	LD50 1,530 mg/kg
AMORPHOUS SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
AMORPHOUS SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
AMORPHOUS SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
PHOSPHORIC ACID	Rabbit	Corrosive
AMORPHOUS SILICA	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
PHOSPHORIC ACID	official classification	Corrosive

AMORPHOUS SILICA	Rabbit	No significant irritation
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**Skin Sensitization**

Name	Species	Value
PHOSPHORIC ACID	Human	Not sensitizing
AMORPHOUS SILICA	Human and animal	Not sensitizing

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
PHOSPHORIC ACID	In Vitro	Not mutagenic
AMORPHOUS SILICA	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
AMORPHOUS SILICA	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
PHOSPHORIC ACID	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
PHOSPHORIC ACID	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
PHOSPHORIC ACID	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
AMORPHOUS SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
AMORPHOUS SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
AMORPHOUS SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
PHOSPHORIC ACID	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
AMORPHOUS SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information

on this material and/or its components.

## SECTION 12: Ecological information

### Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

### Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility.

**EPA Hazardous Waste Number (RCRA):** D002 (Corrosive)

## SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### 311/312 Hazard Categories:

Fire Hazard - No    Pressure Hazard - No    Reactivity Hazard - No    Immediate Hazard - Yes    Delayed Hazard - No

### 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## SECTION 16: Other information

**NFPA Hazard Classification**

**Health: 3 Flammability: 0 Instability: 0 Special Hazards: None**

**Corrosive: Yes**

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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