

SAFETY DATA SHEETS

This SDS packet was issued with item:

078545773

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078544716

Material Safety Data Sheet

Issue: 06/25/2012

Revision Number: 12

1. Identification of Substance /Preparation and Company /Undertaking

Product Name: ALL-ETCH/ UNI-ETCH/SELECT HV ETCH/ETCH-37 (with/without BAC)
 Manufacturer: Bisco, Inc. 1100 W Irving Park Road, Schaumburg, IL 60193 USA
 Telephone: 1-847-534-6000, during normal business hours

Emergency CHEMTREC - 24-Hour Hazmat Emergency Communications Center
 Telephone Number: Domestic: 1-800-424-9300 Outside the U.S.: 1-703-527-3887, collect calls accepted

EC Representative: Bisico France, 120, allée de la Coudoulette, 13680 Lançon de Provence, France
 Telephone: 33-4-90-42-92-92

2. Composition /Information on Ingredients

Ingredient	Concentration Range (%)	CAS Number	Symbol/Risk Classificaton	OSHA PEL (mg/m3)	ACGIH (mg/m3)	LD50 (mg/kg, rat/oral)
ALL-ETCH: Phosphoric Acid.	>10.	7664-38-2.	Xi; R36/38.	1.	1.	1530.
UNI-ETCH: Phosphoric Acid.	>25.	7664-38-2.	C; R34.	1.	1.	1530.
ETCH-37: Phosphoric Acid..	>25..	7664-38-2..	C; R34..	1..	1..	1530..
SELECT HV ETCH-; Phosphoric Acid.	>25...	7664-38-2...	C; R34...	1...	1...	1530...
Benzalkonium Chloride (BAC)*. * only for those marked with BAC	1.	8001-54-5.	Xi; R36/38.	N/D.	N/D.	240.

3. Hazards Identification

Irritant; Irritating to eyes and skin, Corrosive; Causes burns.

4. First-aid Measures

Inhalation: Provide fresh air and rest. Get medical attention.
 Skin Contact: Wash with soap and water.
 Eye Contact: Flush with running water for at least 15 minutes while keeping eye lids open; seek medical attention.
 Ingestion: Drink two glasses of water or milk. Seek medical attention if a substantial amount has been ingested. Do not induce vomiting.

5. Fire-fighting Measures

Fire-fighting media: Dry chemical powder, foam or carbon dioxide.
 Fire and explosion risks: Upon combustion, irritating gases may form.

6. Accidental Release Measures

Personal Precautions: Prevent skin/eye contact.
 Environmental Precautions: Avoid ground water contamination.
 Methods for Cleaning Up: Wipe with damp paper towels, Discard properly.

7. Handling and Storage

Use according to directions for use. Store at room temperature (20°C/68°F - 25°C/77°F) in the original container provided by the manufacturer. Avoid skin contact. At high temperatures toxic fumes of phosphoric acid and phosphorous oxides can be generated. Advdoic or protect from sunlight.

8. Exposure Controls /Personal Protection

Eye Protection: Use protective eyewear.

Hand Protection: Use protective gloves.

Respiratory Protection: Avoid prolonged breathing of vapors of uncured material

Skin Protection: Use any necessary hygiene measures.

9. Physical / Chemical Properties

Appearance	Semi-gel	Vapor Pressure @ 20C/68F	N/A
Color	Blue or Green	Miscibility	N/A
Odor	Odorless	Vapor Density	N/A
Solubility (H ₂ O, fat)	Miscible	pH	<1
Boiling Point / Range	>100°C / 212°F	Evaporation Rate	N/A
Melting Point / Range	< 0°C / 32°F	Viscosity	N/A
Flash Point	N/A	Partition Coefficient	N/A
Conductivity	N/A	Autoflammability	N/A
Explosive Properties	N/A	Flammability	N/A
Oxidizing Properties	N/A	Relative Density	N/A

10. Stability and Reactivity

Stable. Avoid high temperatures. Incompatible with strong caustics, metals, sulfides, and sulfites.

11. Toxicological Information

Eye Contact: Causes burns..

Skin Contact: Causes burns..

Sensitization: May cause allergic reaction on contact with the skin.

Other: If swallowed, may cause sore throat and burns of the mouth and throat. Prolonged exposure may cause burns to the respiratory tract, contact with soft tissue may cause burns..

12. Ecological Information

There is no specific information on the product. Use according to good working practices, avoiding release of the product into environment.

13. Disposal Considerations

Refer to any Community provisions relating to waste. In their absence, refer to National or Regional provisions relating to waste.

14. Transport Information

No special precautions.

15. Regulatory Information

Classification: Xi Irritant, C Corrosive, R34 Causes burns., R36 Irritating to eyes., R38 Irritating to skin.

Safety: S1/2 Keep locked up and out of the reach of children. S26 In case of contact with eyes rinse immediately with water and seek medical advice. S45 In case of accident or if you feel unwell seek medical advice immediately (show label where possible)..

16. Other Information

Revision Date: 06/25/2012
Revision Number: 13

Replaces MSDS dated: 07/19/2011
Product: ALL-ETCH/ UNI-ETCH/SELECT HV ETCH/ETCH-37
(with/without BAC)

This information is believed to be correct as of the date of this MSDS. The manufacturer makes no representation as to the completeness or accuracy of this information and supplies it on the condition that the person receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information contained herein.

NOTE: CHEMTREC provides an emergency telephone number in the event of an emergency for leak, fire, exposure or accident involving the hazardous material that is being shipped. All non-emergency inquiries should be directed to Bisco during normal working hours.



Uni-Etch/Select HV Etch/Etch 37 with BAC

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/25/2018

Version: 2.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Uni-Etch/Select HV Etch/Etch 37 with BAC

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For RX only

1.3. Supplier

Manufacturer

Bisco, Inc.
1100 W. Irving Park Rd.
Schaumburg, IL 60193
T 1.847.534.6000 - F 1.847.891.5049
sales@bisco.com - www.bisco.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - 24-Hour Hazmat Emergency Communications Center
Domestic: 1-800-424-9300 Outside the U.S.: 1-703-527-3887, collect calls accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 1A	H314	Causes severe skin burns and eye damage
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P260 - Do not breathe vapors.
P264 - Wash hands thoroughly after handling
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
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 doctor, a POISON CENTER
P321 - Specific treatment (see First aid measures on this label)
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose in a safe manner in accordance with local/national regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Phosphoric Acid, conc=85%	(CAS-No.) 7664-38-2	30 - 45	Skin Corr. 1B, H314 Eye Dam. 1, H318
Benzalkonium Chloride	(CAS-No.) 63449-41-2	1 - 5	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : Burns.
- Symptoms/effects after eye contact : Serious damage to eyes.
- Symptoms/effects after ingestion : Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phosphoric Acid, conc=85% (7664-38-2)

Not applicable

Benzalkonium Chloride (63449-41-2)

Not applicable

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Semi Gel
- Color : Blue
- Odor : Odourless
- Odor threshold : No data available
- pH : < 1
- Melting point : < 0 °C
- Freezing point : No data available
- Boiling point : > 100 °C
- Flash point : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Flammability (solid, gas) : Not applicable.
- Vapor pressure : No data available
- Relative vapor density at 20 °C : No data available
- Relative density : No data available
- Solubility : No data available
- Log Pow : No data available
- Auto-ignition temperature : No data available

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Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Benzalkonium Chloride (63449-41-2)	
LD50 oral rat	600 mg/kg (Rat, Literature study)
LD50 dermal rat	1560 mg/kg (Rat, Literature study)
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	1560 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: < 1

Serious eye damage/irritation : Not classified
pH: < 1

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

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Phosphoric Acid, conc=85% (7664-38-2)

LC50 fish 1	138 mg/l (Pisces)
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Benzalkonium Chloride (63449-41-2)

LC50 fish 1	0.85 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	0.016 mg/l (48 h, Daphnia magna)

12.2. Persistence and degradability

Phosphoric Acid, conc=85% (7664-38-2)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Phosphoric Acid, conc=85% (7664-38-2)

Bioaccumulative potential	Does not contain bioaccumulative component(s).
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12.4. Mobility in soil

Phosphoric Acid, conc=85% (7664-38-2)

Ecology - soil	No (test)data on mobility of the components available.
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN1805 Phosphoric acid solution, 8, III
UN-No.(DOT)	: UN1805
Proper Shipping Name (DOT)	: Phosphoric acid solution
Class (DOT)	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241

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DOT Special Provisions (49 CFR 172.102)	: A7 - Steel packaging must be corrosion-resistant or have protection against corrosion. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Transport document description	: UN1805 PHOSPHORIC ACID, LIQUID (PHOSPHORIC ACID, LIQUID), 8, III
UN-No. (TDG)	: UN1805
Proper Shipping Name (Transportation of Dangerous Goods)	: PHOSPHORIC ACID, LIQUID
TDG Primary Hazard Classes	: 8 - Class 8 - Corrosives
Packing group	: III - Minor Danger
Explosive Limit and Limited Quantity Index	: 5
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 5

Transport by sea

Air transport

Transport document description (IATA)	: UN 1805 , 8
UN-No. (IATA)	: 1805
Class (IATA)	: 8 - Corrosives

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

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SECTION 16: Other information

Revision date :

Full text of H-phrases:

H301	Toxic if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product



Uni-Etch/Select HV Etch/Etch 37

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/24/2014

Revision date: 03/17/2015

Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Uni-Etch/Select HV Etch/Etch 37

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For professional use only.

1.3. Details of the supplier of the safety data sheet

Bisco, Inc.
1100 W. Irving Park Rd.
Schaumburg, IL 60193
T 847.534.6000 - F 847.891.5049
sales@bisco.com - www.bisco.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - 24-Hour Hazmat Emergency Communications Center
Domestic: 1-800-424-9300 Outside the U.S.: 1-703-527-3887, collect calls accepted

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302
Skin Corr. 1A H314

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Corrosive
Hazard statements (GHS-US) : H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS-US) : P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves, eye protection
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see First aid measures on this label)
P363 - Wash contaminated clothing before reuse
P501 - Dispose in a safe manner in accordance with local/national regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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Name	Product identifier	%	Classification (GHS-US)
phosphoric acid, conc=85%	(CAS No) 7664-38-2	30 - 50	Skin Corr. 1B, H314

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Wash with water and soap. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Get medical advice/attention. 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.
First-aid measures after ingestion	: Give milk to drink. Drink plenty of water. Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry chemical powder. Carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible.
Reactivity	: Thermal decomposition generates : Corrosive vapors.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Absorb spillage to prevent material damage. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
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6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

Uni-Etch/Select HV Etch/Etch 37

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid prolonged and repeated contact with skin. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact during pregnancy/while nursing.
- Handling temperature : 20 - 25 °C
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Store in original container. Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
- Incompatible products : Strong bases. strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Storage temperature : 20 - 25 °C
- Storage area : Keep out of direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

phosphoric acid, conc=85% (7664-38-2)		
USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m³
USA ACGIH	ACGIH STEL (mg/m³)	3 mg/m³

8.2. Exposure controls

- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or face shield.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear approved mask.
- Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Blue;Green
- Odor : odorless
- Odor threshold : No data available
- pH : 0
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : No data available
- Relative vapor density at 20 °C : No data available
- Relative density : No data available
- Solubility : No data available
- Log Pow : No data available
- Log Kow : No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Metals. strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Uni-Etch/Select HV Etch/Etch 37	
LD50 oral rat	1530
ATE US (oral)	1530.00000000 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: < 1

Serious eye damage/irritation : Not classified
pH: < 1

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

phosphoric acid, conc=85% (7664-38-2)	
LC50 fish 1	138 mg/l (96 h; Pisces; Pure substance)
LC50 other aquatic organisms 1	100 - 1000 mg/l (96 h; Protozoa; Pure substance)
LC50 fish 2	100 - 1000 mg/l (Pisces; Pure substance)

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phosphoric acid, conc=85% (7664-38-2)	
LC50 other aquatic organisms 2	240 mg/l (Pure substance)
TLM fish 1	138 ppm (24 h; Gambusia affinis; Pure substance)
Threshold limit other aquatic organisms 1	100 - 1000,96 h; Protozoa; Pure substance
Threshold limit other aquatic organisms 2	240 mg/l (Pure substance)

12.2. Persistence and degradability

Uni-Etch/Select HV Etch/Etch 37	
Persistence and degradability	Not established.

phosphoric acid, conc=85% (7664-38-2)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Uni-Etch/Select HV Etch/Etch 37	
Bioaccumulative potential	Not established.

phosphoric acid, conc=85% (7664-38-2)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

- Effect on ozone layer : No additional information available
- Effect on the global warming : No known ecological damage caused by this product.
- Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose in a safe manner in accordance with local/national regulations.
- Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

- In accordance with DOT
- Transport document description : UN3453 Phosphoric acid, solid, 8, III
- UN-No.(DOT) : 3453
- DOT NA no. : UN3453
- Proper Shipping Name (DOT) : Phosphoric acid, solid
- Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Hazard labels (DOT) : 8 - Corrosive



- Packing group (DOT) : III - Minor Danger

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DOT Special Provisions (49 CFR 172.102)	: IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 213
DOT Packaging Bulk (49 CFR 173.xxx)	: 240
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 25 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 100 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Additional information

Other information : No supplementary information available.

ADR

Transport document description	: UN 1805, 8, III, (E)
Packing group (ADR)	: III
Class (ADR)	: 8 - Corrosive substances
Hazard identification number (Kemler No.)	: 80
Classification code (ADR)	: C1
Hazard labels (ADR)	: 8 - Corrosive substances



Orange plates



Tunnel restriction code (ADR)	: E
LQ	: 5L
Excepted quantities (ADR)	: E1

Transport by sea

No additional information available

Air transport

UN-No.(IATA)	: 1805
Class (IATA)	: 8 - Corrosives

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

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15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

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

Acute Tox. 4 (Oral) H302

Skin Corr. 1A H314

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

15.2.2. National regulations

No additional information available

15.3. US State regulations

SECTION 16: Other information

Revision date : 03/17/2015

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product