



Liquid Etchant

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 13/04/2015

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Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : Liquid Etchant

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Bisco, Inc. 1100 W Irving Park Road, Schaumburg, IL 60193 USA
1-847-534-6000, during normal business hours
www.bisco.com

EC Representative:

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

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

Skin Corr. 1A H314

Full text of H-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Corrosive
Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
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
P501 - Dispose in a safe manner in accordance with local/national regulations
P270 - Do not eat, drink or smoke when using this product

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
phosphoric acid, conc=85%	(CAS No) 7664-38-2 (EC no) 231-633-2 (EC index no) 015-011-00-6	30 - 50	C; R34
Name	Product identifier	Specific concentration limits	
phosphoric acid, conc=85%	(CAS No) 7664-38-2 (EC no) 231-633-2 (EC index no) 015-011-00-6	(10 =< C < 25) Xi; R36/38 (C >= 25) C; R34	
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
phosphoric acid, conc=85%	(CAS No) 7664-38-2 (EC no) 231-633-2 (EC index no) 015-011-00-6	30 - 50	Skin Corr. 1B, H314
Name	Product identifier	Specific concentration limits	
phosphoric acid, conc=85%	(CAS No) 7664-38-2 (EC no) 231-633-2 (EC index no) 015-011-00-6	(10 =< C < 25) Eye Irrit. 2, H319 (10 =< C < 25) Skin Irrit. 2, H315 (C >= 25) Skin Corr. 1B, H314	

Full text of R- and H-phrases: see section 16

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 : 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 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 : Rinse mouth. Do NOT induce vomiting. 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.

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 : 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

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering 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.

6.1.2. For emergency responders

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

6.2. Environmental precautions

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

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact during pregnancy/while nursing.

Hygiene measures : Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. 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)		
EU	IOELV TWA (mg/m³)	1 mg/m³
EU	IOELV STEL (mg/m³)	2 mg/m³
Belgium	Limit value (mg/m³)	1 mg/m³
Belgium	Short time value (mg/m³)	mg/m³
France	VME (mg/m³)	Acide phosphorique, 1 mg/m³; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative
France	VME (ppm)	Acide phosphorique, 0.2 ppm; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative
France	VLE (mg/m³)	Acide phosphorique, 2 mg/m³; France; Short time value; VRI: Valeur réglementaire indicative
France	VLE (ppm)	Acide phosphorique, 0.5 ppm; France; Short time value; VRI: Valeur réglementaire indicative
Netherlands	Grenswaarde TGG 8H (mg/m³)	Fosforzuur, 1 mg/m³; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value
Netherlands	Grenswaarde TGG 8H (ppm)	Fosforzuur, 0.25 ppm; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	Fosforzuur, 2 mg/m³; Netherlands; Short time value; Public occupational exposure limit value
Netherlands	Grenswaarde TGG 15MIN (ppm)	Fosforzuur, 0.49 ppm; Netherlands; Short time value; Public occupational exposure limit value
United Kingdom	WEL TWA (mg/m³)	1 mg/m³
United Kingdom	WEL STEL (mg/m³)	2 mg/m³
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 appropriate mask

Other information : Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: Green.
Odour	: Odourless.
Odour threshold	: No data available
pH	: < 1
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable
Vapour pressure	: < 0.02 mm Hg
Relative vapour density at 20 °C	: No data available
Relative density	: > 1
Solubility	: Soluble
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising 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 vapours.

10.2. Chemical stability

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

Strong acids. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: < 1
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: < 1
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met

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Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

phosphoric acid, conc=85% (7664-38-2)	
LC50 fishes 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)
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

Liquid Etchant	
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

Liquid Etchant	
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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional 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.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not regulated for transport

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14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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ADN

Transport hazard class(es) (ADN)	: Not applicable
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RID

Transport hazard class(es) (RID)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

14.6.1. Overland transport

14.6.2. Transport by sea

14.6.3. Air transport

14.6.4. Inland waterway transport

Not subject to ADN	: No
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14.6.5. Rail transport

Carriage prohibited (RID)	: No
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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions
Liquid Etchant is not on the REACH Candidate List
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

Water hazard class (WGK)	: 1 - slightly hazardous to water
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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF 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.

Other information : None.

Full text of R-, H- and EUH-phrases:

Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H314	Causes severe skin burns and eye damage
R34	Causes burns
C	Corrosive

SDS EU (REACH Annex II)

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