

SAFETY DATA SHEET

ELECTROLYTE D2

Section 1. Identification

GHS product identifier : ELECTROLYTE D2
Cat. No. : 40900032
Container size : 1 l
Other means of identification : Not available.
Product type : Liquid.

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

Product use : For electrolytic preparation of metallographic specimens
Area of application : Professional applications.

Supplier's details : Struers Inc.
24766 Detroit Rd. Westlake
Cleveland, OH 44145
United States
Telephone: +1 (440) 871 0071

e-mail address of person responsible for this SDS : sdsquestions@struers.dk

Emergency telephone number (with hours of operation) : National Capital Poison Center: 1-800-222-1222
Infotrac: 1-800-535-5053
Struers US:
1-440-871-0071

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : H226 FLAMMABLE LIQUIDS - Category 3
H314 SKIN CORROSION - Category 1
H318 SERIOUS EYE DAMAGE - Category 1
H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 - Flammable liquid and vapor.
H314 - Causes severe skin burns and eye damage.
H336 - May cause drowsiness or dizziness.

Precautionary statements

Date of issue/Date of revision : 03/20/2026 **Date of previous issue** : 01/13/2025 **Version** : 3 1/17



Section 2. Hazards identification

Prevention	: P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
Response	: P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. P363 - Wash contaminated clothing before reuse. P305 + P351 + P338, P310 - 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.
Storage	: P405 - Store locked up. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Do not taste or swallow. Wash thoroughly after handling.
Hazards not otherwise classified	: Causes digestive tract burns.
Hazards identified when used	: No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

Ingredient name	Synonyms	%	Identifiers
Phosphoric acid	-	≥15 - ≤40	CAS: 7664-38-2
ethanol	-	≥10 - ≤30	CAS: 64-17-5
propan-1-ol	-	≥1 - ≤5	CAS: 71-23-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
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Section 4. First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes severe burns.
- Ingestion** : Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.



Section 4. First aid measures

- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up



Section 6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from alkalis. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Phosphoric acid	ACGIH TLV (United States, 1/2025) TWA 8 hours: 1 mg/m ³ . STEL 15 minutes: 3 mg/m ³ . NIOSH REL (United States, 10/2020) TWA 10 hours: 1 mg/m ³ . STEL 15 minutes: 3 mg/m ³ . OSHA PEL (United States, 5/2018) TWA 8 hours: 1 mg/m ³ .



Section 8. Exposure controls/personal protection

ethanol	CAL OSHA PEL (United States, 1/2025) STEL 15 minutes: 3 mg/m³. TWA 8 hours: 1 mg/m³. NIOSH REL (United States, 10/2020) TWA 10 hours: 1000 ppm. TWA 10 hours: 1900 mg/m³. OSHA PEL (United States, 5/2018) TWA 8 hours: 1000 ppm. TWA 8 hours: 1900 mg/m³.
propan-1-ol	CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 1900 mg/m³. TWA 8 hours: 1000 ppm. ACGIH TLV (United States, 1/2025) A4. TWA 8 hours: 100 ppm. NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 500 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 625 mg/m³. OSHA PEL (United States, 5/2018) TWA 8 hours: 200 ppm. TWA 8 hours: 500 mg/m³. CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 625 mg/m³. STEL 15 minutes: 250 ppm. TWA 8 hours: 500 mg/m³. TWA 8 hours: 200 ppm.

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.



Section 8. Exposure controls/personal protection

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Recommended: Butyl rubber gloves. The breakthrough time must be greater than the end use time of the product.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: (as filter combination A2/P2)

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.
Color : Colorless.
Odor : Odorless.
Odor threshold : Not available.
pH : <2
Melting point/freezing point : Not available.
Boiling point or initial boiling point and boiling range : Not available.
Flash point : Closed cup: 23 to 60°C (73.4 to 140°F)
Evaporation rate : Not available.
Flammability : Not available.
Lower and upper explosion limit/flammability limit : Not available.
Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
ethanol	42.94865	5.7				

Relative vapor density : Not available.
Relative density : 1.11
Density : Not available.



Section 9. Physical and chemical properties

Solubility(ies)	:	<table><tr><th>Media</th><th>Result</th></tr><tr><td>water</td><td>Soluble</td></tr></table>	Media	Result	water	Soluble				
Media	Result									
water	Soluble									
Miscible with water	:	Yes.								
Partition coefficient: n-octanol/water	:	Not applicable.								
Auto-ignition temperature	:	<table><tr><th>Ingredient name</th><th>°C</th><th>°F</th><th>Method</th></tr><tr><td>ethanol</td><td>455</td><td>851</td><td>DIN 51794</td></tr></table>	Ingredient name	°C	°F	Method	ethanol	455	851	DIN 51794
Ingredient name	°C	°F	Method							
ethanol	455	851	DIN 51794							
Decomposition temperature	:	Not available.								
SADT	:	Not available.								
Viscosity	:	Dynamic (room temperature): Not available. Kinematic (room temperature): 6.8 mm²/s (6.8 cSt) Kinematic (40°C (104°F)): Not available.								
Flow time (ISO 2431)	:	Not available.								
<u>Particle characteristics</u>										
Median particle size	:	Not applicable.								
<u>Additional information</u>										
Physical/chemical properties comments	:	No additional information.								

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.			
Chemical stability	:	The product is stable.			
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.			
	:	Under normal conditions of storage and use, hazardous polymerization will not occur.			
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.			
Incompatible materials	:	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.			
	:	Reactive or incompatible with the following materials:			
	:	alkalis oxidizing materials			
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.			



Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

Phosphoric acid

Result

Rabbit - Dermal - LD50

2740 mg/kg

Rat - Oral - LD50

1.25 g/kg

Toxic effects: Lung, Thorax, or
Respiration - Acute pulmonary edema
Liver - Changes in liver weight
Toxic effects: Lung, Thorax, or
Respiration - Other changes

ethanol

Rat - Oral - LD50

7060 mg/kg

Rabbit - Dermal - LD50

>15800 mg/kg

Rat - Inhalation - LC50 Vapor

124700 mg/m³ [4 hours]

propan-1-ol

Rat - Oral - LD50

2200 mg/kg

Rabbit - Dermal - LD50

4032 mg/kg

**Rat - Male, Female - Inhalation -
LC50 Vapor**

>33.8 mg/l [4 hours]

Toxic effects: Behavioral - General
anesthetic
OECD [Acute Dermal Toxicity]

OECD 403 [Acute Inhalation Toxicity]

Conclusion/Summary [Product]

: Not available.

Skin corrosion/irritation

Product/ingredient name

ethanol

Result

Rabbit - Skin - Not irritant

OECD 404 [Acute Dermal Irritation/
Corrosion]

propan-1-ol

Rabbit - Skin - Mild irritant

Amount/concentration applied: 500 mg

Conclusion/Summary [Product]

: Not available.

Serious eye damage/eye irritation

Product/ingredient name

ethanol

Result

Rabbit - Eyes - Mild irritant

Duration of treatment/exposure: 24
hours

Amount/concentration applied: 500 mg

Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure:
0.066666667 minutes

Amount/concentration applied: 100 mg

Rabbit - Eyes - Moderate irritant

Amount/concentration applied: 100 uL

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 500 mg

Rabbit - Eyes - Mild irritant

Duration of treatment/exposure: 1 hours
Amount/concentration applied: 50 pph

propan-1-ol

Rabbit - Eyes - Moderate irritant



Section 11. Toxicological information

Duration of treatment/exposure: 24 hours
Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name	Result
propan-1-ol	Guinea pig - skin <u>Result:</u> Not sensitizing Human - skin <u>Result:</u> Not sensitizing

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Product/ingredient name	Result
Phosphoric acid	In vitro - Bacteria <u>Result:</u> Negative In vitro - Mammalian-Animal <u>Result:</u> Negative In vitro - Mammalian-Animal <u>Result:</u> Negative In vitro - Bacteria - Germ <u>Result:</u> Negative In vitro - Mammalian-Animal <u>Result:</u> Negative
propan-1-ol	OECD 471 [Bacterial Reverse Mutation Test] OECD 473 [In vitro Mammalian Chromosomal Aberration Test] OECD 476 [In vitro Mammalian Cell Gene Mutation Test]

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Product/ingredient name	Result
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Section 11. Toxicological information

Phosphoric acid

Rat - Oral
 ≥500 mg/kg - NOAEL
Fertility effects: Negative
Rat - Oral
 ≥410 mg/kg - NOAEL
Maternal toxicity: Negative
Developmental: Negative

OECD 422 [Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test]
 OECD 414 [Prenatal Developmental Toxicity Study]

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name

Result

ethanol

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
 (Narcotic effects) - Category 3

propan-1-ol

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
 (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact : Causes severe burns.
Ingestion : Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness
Inhalation : Adverse symptoms may include the following:
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur



Section 11. Toxicological information

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name

Result

Phosphoric acid

Chronic - Rat - Oral - NOAEL
250 mg/kg [90 days]

OECD 422 [Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test]

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
ELECTROLYTE D2	3266.0	7088.7	N/A	N/A	N/A
Phosphoric acid	1250	2740	N/A	N/A	N/A
ethanol	7060	N/A	N/A	124.7	N/A
propan-1-ol	2200	4032	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

Result

Phosphoric acid

Acute - EC50 - Fresh water
Daphnia
>100 mg/l [48 hours]

OECD [Daphnia sp. Acute Immobilization Test and Reproduction Test]

Acute - EC50 - Fresh water
Algae
>100 mg/l [72 hours]

OECD [Alga, Growth Inhibition Test]

Acute - NOEC - Fresh water

OECD 201 [Alga, Growth Inhibition]



Section 12. Ecological information

ethanol	Algae 100 mg/l [72 hours] EC50 Micro-organism >1000 mg/l [3 hours] Acute - EC50 - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> <u>Age</u> : 31 days; <u>Size</u> : 22 mm; <u>Weight</u> : 0.14 g 12.8 g/l [96 hours] Acute - EC50 Daphnia - <i>Daphnia magna</i> 12340 mg/l [48 hours] Acute - EC50 Algae - <i>Chlorella vulgaris</i> 275 mg/l [72 hours]	Test] OECD 209 [Activated Sludge, Respiration Inhibition Test] <u>Effect</u> : Behavior	
	propan-1-ol	Acute - LC50 - Marine water Fish - Bleak - <i>Alburnus alburnus</i> <u>Size</u> : 8 to 10 cm 3800 mg/l [96 hours] Acute - EC50 - Fresh water Algae - Green algae - <i>Selenastrum sp.</i> 4480 mg/l [96 hours] Acute - LC50 - Fresh water Crustaceans - Scud - <i>Gammarus pulex</i> 1000 mg/l [48 hours]	<u>Effect</u> : Mortality <u>Effect</u> : Population <u>Effect</u> : Mortality

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name	Result
ethanol	84% [20 days] - Readily
propan-1-ol	75% [20 days] - Readily

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethanol	-	-	Readily
propan-1-ol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ethanol	-0.35	-	Low
propan-1-ol	0.2	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

Date of issue/Date of revision : 03/20/2026 **Date of previous issue** : 01/13/2025 **Version** : 3 13/17



Section 12. Ecological information

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN2920	UN2920	UN2920	UN2920	UN2920
UN proper shipping name	Corrosive liquids, flammable, n.o.s. (Phosphoric acid, ethanol)	CORROSIVE LIQUID, FLAMMABLE, N. O.S. (Phosphoric acid, ethanol)	LIQUIDO CORROSIVO INFLAMABLE, N. E.P. (Phosphoric acid, ethanol)	CORROSIVE LIQUID, FLAMMABLE, N. O.S. (Phosphoric acid, ethanol)	Corrosive liquid, flammable, n.o.s. (Phosphoric acid, ethanol)
Transport hazard class(es)	8 (3)  	8 (3)  	8 (3)  	8 (3)  	8 (3)  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification : **Reportable quantity** 13740.6 lbs / 6238.2 kg [1484.7 gal / 5620 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 154. Non-bulk: 202. Bulk: 243.
Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L.
Special provisions B2, IB2, T11, TP2, TP27

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.18-2.19 (Class 3).
Explosive Limit and Limited Quantity Index 1
Passenger Carrying Road or Rail Index 1
Special provisions 16

Mexico Classification : **Special provisions** 274



Section 14. Transport information

IMDG	: Emergency schedules F-E, S-C Special provisions 274 IMDG Code Segregation group SGG1 - Acids
IATA	: Quantity limitation Passenger and Cargo Aircraft: 1 L. Packaging instructions: 851. Cargo Aircraft Only: 30 L. Packaging instructions: 855. Limited Quantities - Passenger Aircraft: 0.5 L. Packaging instructions: Y840.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are active or exempted.
Clean Water Act (CWA) 311: Phosphoric acid

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 3
SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
HNOC - Corrosive to digestive tract

Composition/information on ingredients



Section 15. Regulatory information

Name	%	Classification
Phosphoric acid	≥15 - ≤40	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 HNOC - Corrosive to digestive tract
ethanol	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
propan-1-ol	≥1 - ≤5	FLAMMABLE LIQUIDS - Category 3 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant

SARA 313

Not applicable.

State regulations

- Massachusetts** : The following components are listed: PHOSPHORIC ACID; ETHYL ALCOHOL; PROPYL ALCOHOL
- New York** : The following components are listed: Phosphoric acid
- New Jersey** : The following components are listed: PHOSPHORIC ACID; ETHYL ALCOHOL; PROPYL ALCOHOL
- Pennsylvania** : The following components are listed: PHOSPHORIC ACID; ETHANOL; 1-PROPANOL

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	3
Flammability		2
Physical hazards		0



Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	On basis of test data On basis of test data On basis of test data Calculation method

History

Date of issue/Date of revision	: 03/20/2026
Date of previous issue	: 01/13/2025
Version	: 3
Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group TDG = Transportation of Dangerous Goods UN = United Nations
References	: HCS (U.S.A.)- Hazard Communication Standard International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

