



SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : AdvancedGel EC

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Washing and cleaning products (including solvent based products)
Recommended use : Air Conditioning Evaporator Cleaner

1.3. Supplier

Aspen Pumps Inc.
Building C, 14600 Brown Road, Tomball
TX 77377, USA

sales-us@aspenpumps.com

T: +1 346 236 1270

1.4. Emergency telephone number

Emergency number : 1-800-424-9300 (CHEMTREC)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 1B H314 Causes severe skin burns and eye damage

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS US) : P260 - Do not breathe fume.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear eye protection, protective gloves.
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.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : The product does not meet the PBT and vPvB classification criteria.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

AdvancedGel EC

Safety Data Sheet

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

3.2. Mixtures

| Name | Product identifier | % | GHS US classification |
|--|----------------------|---------|--|
| Orthophosphoric acid ... % | (CAS-No.) 7664-38-2 | 20 – 60 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 |
| Citric Acid | (CAS-No.) 77-92-9 | 1 – 10 | Eye Irrit. 2, H319 Aquatic Acute 3, H402 |
| Poly(oxy-1,2-ethanediyl), alphasodecyl-omega-hydroxy | (CAS-No.) 61827-42-7 | 1 – 10 | Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 |

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 person 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 (acute and delayed)

- Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation.
- Symptoms/effects after skin contact : Burns.
- Symptoms/effects after eye contact : Causes serious eye damage.
- Symptoms/effects after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion may cause nausea, vomiting and diarrhea.

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 : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : No fire hazard.
- Explosion hazard : Product is not explosive.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

- 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.

AdvancedGel EC

Safety Data Sheet

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

6.3. Methods and material for containment and cleaning up

- For containment : Contain the spilled material by bunding.
- 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 vapor. Do not breathe dust/fume/gas/mist/vapors/spray.
- Hygiene measures : Wash hands, forearms and face 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 only in the original container in a cool, well ventilated place away from Sunlight. Keep container closed when not in use.
- Incompatible products : Strong bases.
- Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| AdvancedGel EC | |
|---|--------------------------|
| No additional information available | |
| Citric Acid (77-92-9) | |
| No additional information available | |
| Orthophosphoric acid ... % (7664-38-2) | |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Phosphoric acid |
| ACGIH TWA (mg/m³) | 1 mg/m³ |
| ACGIH STEL (mg/m³) | 3 mg/m³ |
| Remark (ACGIH) | URT, eye, & skin irr |
| Regulatory reference | ACGIH 2020 |
| USA - OSHA - Occupational Exposure Limits | |
| Local name | Phosphoric acid |
| OSHA PEL (TWA) (mg/m³) | 1 mg/m³ |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| Poly(oxy-1,2-ethanediyl), alphasodecyl-omega-hydroxy (61827-42-7) | |
| No additional information available | |

8.2. Appropriate engineering controls

Good general ventilation. Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Protective gloves made of PVC

| Type | Material | Permeation | Thickness (mm) | Permeation |
|-------------------|-------------------------|------------------|----------------|------------|
| Disposable gloves | Polyvinylchloride (PVC) | 3 (> 60 minutes) | | 2 (< 1.5) |

AdvancedGel EC

Safety Data Sheet

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

Eye protection:

Chemical goggles or face shield

| Type | Use | Characteristics |
|----------------|-----|--------------------------------|
| Safety goggles | | tightly fitting safety goggles |

Skin and body protection:

Wear suitable protective clothing

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Gel |
| Color | : Blue |
| Odor | : Barely perceptible odour |
| Odor threshold | : No data available |
| pH | : 2 |
| Melting point | : 0 °C |
| Freezing point | : 0 °C |
| Boiling point | : 100 °C |
| Flash point | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Relative density | : 1.5g/ml |
| Solubility | : Water: Solubility in water of component(s) of the mixture : • Citric Acid: 592000 mg/l • Othophosphoric acid... %: 539000 mg/l |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature | : No data available |
| 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

This product is non-reactive under normal condition of use, storage and transportation.

10.2. Chemical stability

AdvancedGel EC

Safety Data Sheet

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

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong bases and strong oxidising agents.

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 (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

| Citric Acid (77-92-9) | |
|---|-------------------------|
| ATE US (oral) | 11700 mg/kg body weight |
| Orthophosphoric acid ... % (7664-38-2) | |
| ATE US (oral) | 1530 mg/kg body weight |
| ATE US (dermal) | 2740 mg/kg body weight |
| Poly(oxy-1,2-ethanediyl), alphasodecyl-omega-hydroxy (61827-42-7) | |
| ATE US (oral) | 500 mg/kg body weight |

Skin corrosion/irritation : Causes severe skin burns.

Serious eye damage/irritation : Assumed to cause serious eye damage

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

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

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion may cause nausea, vomiting and diarrhea.

SECTION 12: Ecological information

12.1. Toxicity

| Citric Acid (77-92-9) | |
|--|----------------------|
| LC50 fish 1 | > 100 mg/l |
| EC50 other aquatic organisms 1 | 85 mg/l waterflea |
| Orthophosphoric acid ... % (7664-38-2) | |
| EC50 other aquatic organisms 1 | > 100 mg/l waterflea |

AdvancedGel EC

Safety Data Sheet

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

Orthophosphoric acid ... % (7664-38-2)

| | |
|--------------------------------|------------|
| EC50 other aquatic organisms 2 | > 100 mg/l |
|--------------------------------|------------|

12.2. Persistence and degradability

AdvancedGel EC

| | |
|-------------------------------|----------------|
| Persistence and degradability | Biodegradable. |
|-------------------------------|----------------|

Citric Acid (77-92-9)

| | |
|-------------------------------|----------------|
| Persistence and degradability | Biodegradable. |
|-------------------------------|----------------|

12.3. Bioaccumulative potential

AdvancedGel EC

| | |
|---------------------------|-------------------------------|
| Bioaccumulative potential | No bioaccumulative potential. |
|---------------------------|-------------------------------|

Citric Acid (77-92-9)

| | |
|---|-------|
| Partition coefficient n-octanol/water (Log Pow) | -1.72 |
|---|-------|

| | |
|---------------------------|-------------------------------------|
| Bioaccumulative potential | Not expected to be bioaccumulative. |
|---------------------------|-------------------------------------|

Orthophosphoric acid ... % (7664-38-2)

| | |
|---|-------|
| Partition coefficient n-octanol/water (Log Pow) | -0.77 |
|---|-------|

12.4. Mobility in soil

Readily absorbed in soil. Soluble in water

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3264 Corrosive liquid, acidic, inorganic, n.o.s. (Orthophosphoric acid... %), 8, II

UN-No.(DOT) : UN3264

Proper Shipping Name (DOT) : Corrosive liquid, acidic, inorganic, n.o.s.
Orthophosphoric acid ... %

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : II - Medium Danger

Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

AdvancedGel EC

Safety Data Sheet

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

| | |
|--|---|
| DOT Special Provisions (49 CFR 172.102) | : 386 - Notwithstanding the provisions of §177.834(l) of this subchapter, cargo heaters may be used when weather conditions are such that the freezing of a wetted explosive material is likely. Shipments must be made by private, leased or contract carrier vehicles under exclusive use of the offeror. Cargo heaters must be reverse refrigeration (heat pump) units. Shipments made in accordance with this Special provision are excepted from the requirements of §173.60(b)(4) of this subchapter. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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. T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 154 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 1 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 30 L |
| DOT Vessel Stowage Location | : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| DOT Vessel Stowage Other | : 40 - Stow "clear of living quarters" |
| Emergency Response Guide (ERG) Number | : 154 |
| Other information | : No supplementary information available. |

Transportation of Dangerous Goods

Not applicable

Transport by sea

| | |
|---------------------------------------|---|
| Transport document description (IMDG) | : UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. Orthophosphoric acid ... %), 8, II |
| UN-No. (IMDG) | : 3264 |
| Proper Shipping Name (IMDG) | : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. |
| Class (IMDG) | : 8 - Corrosive substances |
| Packing group (IMDG) | : II - substances presenting medium danger |
| Limited quantities (IMDG) | : 1 L |

Air transport

| | |
|---------------------------------------|---|
| Transport document description (IATA) | : UN 3264 Corrosive liquid, acidic, inorganic, n.o.s. (Orthophosphoric acid ... %), 8, II |
| UN-No. (IATA) | : 3264 |
| Proper Shipping Name (IATA) | : Corrosive liquid, acidic, inorganic, n.o.s. |
| Class (IATA) | : 8 - Corrosives |
| Packing group (IATA) | : II - Medium Danger |

AdvancedGel EC

Safety Data Sheet

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

SECTION 15: Regulatory information

15.1. US Federal regulations

Citric Acid (77-92-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Orthophosphoric acid ... % (7664-38-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ

5000 lb

Poly(oxy-1,2-ethanediyl), alphaisodecyl-omega-hydroxy (61827-42-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag

XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

*All components of this product are listed on the TSCA inventory and comply with the inventory requirements.

15.2. International regulations

CANADA

Citric Acid (77-92-9)

Listed on the Canadian DSL (Domestic Substances List)

Orthophosphoric acid ... % (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List)

Poly(oxy-1,2-ethanediyl), alphaisodecyl-omega-hydroxy (61827-42-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

| Component | State or local regulations |
|--|---|
| Orthophosphoric acid ... % (7994-38-2) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |

SECTION 16: Other information

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

Other information : None.

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.