Printing date 01/11/2018 Reviewed on 01/11/2018

1 Identification

· Product identifier

· Trade name: WS139 & 140

Ethyl Acetate Solution

· Article number: THE395

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier: Aqua Solutions, Inc. 6913 Highway 225 DEER PARK, TX 77536 USA 800-256-2586

· Information department:

Technical Coordinator

Sherman Nelson sherman@aquasolutions.org

· Emergency telephone number: Chemtrec: 800-424-9300 Canutec: 613-996-6666



2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS02

2 GHS07

- · Signal word Danger
- · Hazard-determining components of labeling:

Ethyl Acetate

· Hazard statements

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause drowsiness or dizziness.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

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Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

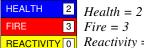
Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 2Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



3 Fire = 3

REACTIVITY 0 Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

| · Dangerous con | ponents: | |
|------------------|----------------------|---------|
| CAS: 141-78-6 | Ethyl Acetate | 99.722% |
| · Table of Nonho | azardous Ingredients | |
| | Glycerin (Glycerol) | 0.167% |
| CAS: 107-21-1 | Ethylene Glycol | 0.0555% |
| CAS: 102-71-6 | Triethanolamine 99% | 0.0555% |

4 First-aid measures

- · Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.

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- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

| · PAC-1: | | |
|---------------|---------------------|------------------------|
| CAS: 141-78-6 | Ethyl Acetate | 1,200 ppm |
| CAS: 56-81-5 | Glycerin (Glycerol) | 45 mg/m³ |
| CAS: 107-21-1 | Ethylene Glycol | 30 ppm |
| CAS: 102-71-6 | Triethanolamine 99% | 15 mg/m ³ |
| · PAC-2: | | |
| CAS: 141-78-6 | Ethyl Acetate | 1,700 ppm |
| CAS: 56-81-5 | Glycerin (Glycerol) | 180 mg/m³ |
| CAS: 107-21-1 | Ethylene Glycol | 150 ppm |
| CAS: 102-71-6 | Triethanolamine 99% | 240 mg/m³ |
| · PAC-3: | | |
| CAS: 141-78-6 | Ethyl Acetate | 10000** ppm |
| CAS: 56-81-5 | Glycerin (Glycerol) | $1,100 \text{ mg/m}^3$ |
| CAS: 107-21-1 | Ethylene Glycol | 900 ppm |
| | | (Contd. on page 4 |

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Ethyl Acetate Solution

 CAS: 102-71-6
 Triethanolamine 99%
 (Contd. of page 3)

 1,500 mg/m³
 1,500 mg/m³

7 Handling and storage

- · Handling:
- Precautions for safe handling No special precautions are necessary if used correctly.
- · Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- · Conditions for safe storage, including any incompatibilities
- · Storage.
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

 \cdot *Specific end use(s) No further relevant information available.*

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

| CAS: | 141-78-6 | Ethyl. | Acetate |
|------|----------|--------|---------|
|------|----------|--------|---------|

PEL Long-term value: 1400 mg/m³, 400 ppm REL Long-term value: 1400 mg/m³, 400 ppm TLV Long-term value: 1440 mg/m³, 400 ppm

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- · Breathing equipment: Not required.
- · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

| 9 Physical | ana | CI | <i>1ет</i> іса | l prope | rties |
|------------|-----|----|----------------|---------|-------|
| | | | | | |

| · Information on basic physical and chemical propert | · Information of | n basic physical | l and chemica | l properties |
|--|------------------|------------------|---------------|--------------|
|--|------------------|------------------|---------------|--------------|

· General Information

· Appearance:

Form: Liquid
Color: Colorless
Odor: Fruit-like
Odor threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: $-83.57 \, ^{\circ}\text{C} \, (-118.4 \, ^{\circ}\text{F})$ Boiling point/Boiling range: $77 \, ^{\circ}\text{C} \, (170.6 \, ^{\circ}\text{F})$

• Flash point: -1 °C (30.2 °F)

· Flammability (solid, gaseous): Not applicable.

• Ignition temperature: $460 \, ^{\circ}C \, (860 \, ^{\circ}F)$

• Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor

mixtures are possible.

· Explosion limits:

 Lower:
 2.1 Vol %

 Upper:
 11.5 Vol %

· Vapor pressure at 20 °C (68 °F): 97 hPa (72.8 mm Hg)

• Density at 20 °C (68 °F): $0.90084 \text{ g/cm}^3 (7.51751 \text{ lbs/gal})$

Relative density
Vapor density
Evaporation rate
Not determined.
Not determined.
Not determined.

· Solubility in / Miscibility with

Water at 20 °C (68 °F): 79 g/l

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined.

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Trade name: WS139 & 140

Ethyl Acetate Solution

| | | (Contd. of page |
|---------------------|--|-----------------|
| Kinematic: | Not determined. | |
| · Solvent content: | | |
| Organic solvents: | 99.9 % | |
| VOC content: | 99.78 % | |
| | 898.8 g/l / 7.50 lb/gl | |
| Solids content: | 0.0 % | |
| · Other information | No further relevant information available. | |

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Inhalative LC50/4 h 1,604 mg/l (rat)

- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

| · Carcinogenic categories | |
|---|---|
| · IARC (International Agency for Research on Cancer) | |
| CAS: 102-71-6 Triethanolamine 99% | 3 |
| · NTP (National Toxicology Program) | |
| None of the ingredients is listed. | |
| · OSHA-Ca (Occupational Safety & Health Administration) | |
| None of the ingredients is listed. | |

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.

(Contd. on page 7)

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Ethyl Acetate Solution

(Contd. of page 6)

- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

· Packing group · DOT, IMDG, IATA

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

| 4 Transport information | | |
|--|--|--|
| · UN-Number · DOT, IMDG, IATA | UN1173 | |
| · UN proper shipping name · DOT · IMDG, IATA | Ethyl acetate mixture ETHYL ACETATE mixture | |
| · Transport hazard class(es) | | |
| · Class | 3 Flammable liquids | |
| · Lavet · IMDG, IATA | J | |
| | | |
| · Class | 3 Flammable liquids | |
| · Label | 3 | |

II

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Trade name: WS139 & 140

Ethyl Acetate Solution

| | (Contd. of page |
|--------------------------------------|--|
| Environmental hazards: | |
| Marine pollutant: | No |
| Special precautions for user | Warning: Flammable liquids |
| Danger code (Kemler): | 33 |
| EMS Number: | F- E , S - D |
| Stowage Category | B |
| Transport in bulk according to Annex | II of |
| MARPOL73/78 and the IBC Code | Not applicable. |
| Transport/Additional information: | |
| DOT | |
| Quantity limitations | On passenger aircraft/rail: 5 L |
| ~ , | On cargo aircraft only: 60 L |
| IMDG | |
| Limited quantities (LQ) | 1L |
| Excepted quantities (EQ) | Code: E2 |
| · · · | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |
| UN "Model Regulation": | UN 1173 ETHYL ACETATE MIXTURE, 3, II |

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

CAS: 107-21-1 Ethylene Glycol

· TSCA (Toxic Substances Control Act):

Ethyl Acetate

Glycerin (Glycerol)

Ethylene Glycol

Triethanolamine 99%

- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

CAS: 107-21-1 Ethylene Glycol

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Ethyl Acetate Solution

(Contd. of page 8)

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

CAS: 107-21-1 Ethylene Glycol

A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS02

- GHS07 · Signal word Danger
- · Hazard-determining components of labeling:

Ethyl Acetate

· Hazard statements

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause drowsiness or dizziness.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

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Ethyl Acetate Solution

(Contd. of page 9)

· Contact:

· Date of preparation / last revision

01-11-2018: review SDS for accuracy. STN Creation date for SDS 07-29-2014. STN 01/11/2018 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US