Printing date 05/31/2024

Reviewed on 05/31/2024

Product identifier	
Trade name: <u>Total Acid Number</u> <u>Solution</u>	
Article number: STA025	
Details of the supplier of the safety data sheet Manufacturer/Supplier:	
Aqua Solutions, Inc.	
6913 Highway 225	SOLUTIONS
DEER PARK, TX 77536 USA	
800-256-2586	
Information department: Technical Coordinator	
Sherman Nelson shermann@aquasolutions.org	
Emergency telephone number:	
Chemtrec: 800-424-9300 Canutec: 613-996-6666	
Hazard(s) identification	
Classification of the substance or mixture	
Classification of the substance or mixture GHS02 Flame Flammable Liquids 2	H225 Highly flammable liquid and vapor.
GHS02 Flame	H225 Highly flammable liquid and vapor.
GHS02 Flame Flammable Liquids 2	H225 Highly flammable liquid and vapor. H361 Suspected of damaging fertility or the unborn chil
GHS02 Flame Flammable Liquids 2 GHS08 Health hazard Toxic to Reproduction 2	
GHS02 Flame Flammable Liquids 2 GHS08 Health hazard Toxic to Reproduction 2	H361 Suspected of damaging fertility or the unborn chil H373 May cause damage to organs through prolonged
GHS02 Flame Flammable Liquids 2 GHS08 Health hazard Toxic to Reproduction 2 Specific Target Organ Toxicity - Repeated Exposure 2	H361 Suspected of damaging fertility or the unborn chil H373 May cause damage to organs through prolonged repeated exposure.
GHS02 Flame Flammable Liquids 2 GHS08 Health hazard Toxic to Reproduction 2 Specific Target Organ Toxicity - Repeated Exposure 2 Aspiration Hazard 1	H361 Suspected of damaging fertility or the unborn chil H373 May cause damage to organs through prolonged repeated exposure.
GHS02 Flame Flammable Liquids 2 GHS08 Health hazard Toxic to Reproduction 2 Specific Target Organ Toxicity - Repeated Exposure 2 Aspiration Hazard 1 GHS07	H361 Suspected of damaging fertility or the unborn chil H373 May cause damage to organs through prolonged repeated exposure. H304 May be fatal if swallowed and enters airways.
GHS02 Flame Flammable Liquids 2 GHS08 Health hazard Toxic to Reproduction 2 Specific Target Organ Toxicity - Repeated Exposure 2 Aspiration Hazard 1 GHS07 Skin Irritation 2	 H361 Suspected of damaging fertility or the unborn chil H373 May cause damage to organs through prolonged repeated exposure. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation.

GHS02 GHS07 GHS08

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Signal word Danger	(Contd. of page 1
Hazard-determining components of labeling:	
Toluene	
Isopropanol	
Hazard statements	
Highly flammable liquid and vapor.	
Causes skin irritation.	
Causes serious eye irritation.	
Suspected of damaging fertility or the unborn child.	
May cause drowsiness or dizziness.	
May cause damage to organs through prolonged or repeated exposure.	
May be fatal if swallowed and enters airways.	
Precautionary statements	
Obtain special instructions before use.	
Do not handle until all safety precautions have been read and understood.	
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.	
Do not breathe 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 swallowed: Immediately call a poison center/doctor.	
Specific treatment (see on this label).	
Do NOT induce vomiting.	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/show	er.
<i>IF INHALED: Remove person to fresh air and keep comfortable for breathing.</i>	
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if prese	ent ana easy to ao
Continue rinsing.	
IF exposed or concerned: Get medical advice/attention.	
Call a poison center/doctor if you feel unwell.	
Get medical advice/attention if you feel unwell. Take off contaminated clothing and wash it before reuse.	
If skin irritation occurs: Get medical advice/attention.	
If eye irritation persists: Get medical advice/attention.	
In case of fire: Use CO2, powder or water spray to extinguish.	
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 regulati	ons.
Classification system:	
NFPA ratings (scale 0 - 4)	
Health = 2	
Fire = 3	
2 0 Reactivity = 0	
HMIS-ratings (scale 0 - 4)	
HEALTH 2 $H_{ealth} = 2$	
FIRE 3 $Fire = 3$	
REACTIVITY 0 Reactivity = 0	
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- · 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 comp	ponents:	
CAS: 108-88-3	Toluene	52.102%
CAS: 67-63-0	Isopropanol	46.92%
· Table of Nonhaz	ardous Ingredients	
CAS: 7732-18-5	Water	0.601%
CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	0.352%
CAS: 67-56-1	Methanol	0.02%
CAS: 77-09-8	Phenolphthalein	0.005%
CAS: 1310-58-3	Potassium Hydroxide	0.0002%

4 First-aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- 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. • Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

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Accidental rel	euse meusures	
	tions, protective equipment and emergency procedures	
	y protective device.	
Wear protective e • Environmental p	equipment. Keep unprotected persons away.	
Dilute with plenty		
	nter sewers/ surface or ground water.	
	terial for containment and cleaning up:	
	id-binding material (sand, diatomite, acid binders, universal binders, sawdust).	
Ensure adequate	nated material as waste according to section 13.	
· Reference to oth		
See Section 7 for	information on safe handling.	
v	information on personal protection equipment.	
	r disposal information.	
· Protective Action · PAC-1:	Criteria for Chemicals	
	Toluene	67 ppm
	Isopropanol	400 ppm
	Ethyl Alcohol, Absolute 200 Proof	1,800 ppm
	Methanol	530 ppm
CAS: 77-09-8	Phenolphthalein	4 mg/m^3
CAS: 1310-58-3	Potassium Hydroxide	0.18 mg/m
• PAC-2:		I
CAS: 108-88-3	Toluene	560 ppm
CAS: 67-63-0	Isopropanol	2000* ppn
CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	3300* ppn
CAS: 67-56-1	Methanol	2,100 ppm
CAS: 77-09-8	Phenolphthalein	44 mg/m ³
CAS: 1310-58-3	Potassium Hydroxide	2 mg/m ³
• PAC-3:		
CAS: 108-88-3	Toluene	3700* ppm
CAS: 67-63-0	Isopropanol	12000** ppn
CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	15000* ppm
	Methanol	7200* ppm
CAS: 77-09-8	Phenolphthalein	260 mg/m³
CAS: 1310 58 3	Potassium Hydroxide	54 mg/m ³

7 Handling and storage

- · Handling:
- · Precautions for safe handling
- Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Prevent formation of aerosols.

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(Contd. of page 4)

- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available.
- · 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.
- *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 section 7.

· Control parameters

· Com	nponents with limit values that require monitoring at the workplace:	
CAS	S: 108-88-3 Toluene	
PEL	L Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift	
REL	L Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm	
	<i>V Long-term value: 20 ppm BEI, OTO, A4</i>	
CAS	S: 67-63-0 Isopropanol	
PEL	L Long-term value: 980 mg/m³, 400 ppm	
REL	L Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm	
TLV	V Short-term value: 400 ppm Long-term value: 200 ppm BEI, A4	
· Ingr	redients with biological limit values:	
CAS	S: 108-88-3 Toluene	
BEI	l 0.02 mg/L LD50 Intraperitoneal: blood Time: prior to last shift of workweek LD50: Toluene	
	0.03 mg/L LD50 Intraperitoneal: urine	
	Time: end of shift LD50: Toluene	
	0.3 mg/g creatinine	
	LD50 Intraperitoneal: urine	
	Time: end of shift LD50: o-Cresol with hydrolysis (background)	
	(Contd. or	n page 6)

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Solution

CAS: 67-63-0 Isopropanol

BEI 40 mg/L

LD50 Intraperitoneal: urine Time: end of shift at end of workweek LD50: Acetone (background, nonspecific)

· 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.
- Store protective clothing separately.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

• Protection of hands:



Protective gloves

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 \cdot **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.

· 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

Information on basic physic	cal and chemical properties	
• General Information		
Appearance:		
Form:	Liquid	
Color:	Clear	
Odor:	Organic	
• Odor threshold:	Not determined.	

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Trade name: Total Acid Number Solution

TT T	(Contd. of page
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 82 °C (179.6 °F)
· Flash point:	4 °C (39.2 °F)
· Flammability (solid, gaseous):	Highly flammable.
· Auto igniting:	425 °C (797 °F)
• Decomposition temperature:	Not determined.
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.
· Explosion limits:	
Lower:	1.2 Vol %
Upper:	12 Vol %
· Vapor pressure at 20 °C (68 °F):	43 hPa (32.3 mm Hg)
· Density at 20 °C (68 °F):	0.82841 g/cm ³ (6.91308 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	r): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.4 %
Water:	0.6 %
VOC content:	99.39 %
	823.4 g/l / 6.87 lb/gal
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.

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· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

• Primary irritant effect:

- on the skin: Irritant to skin and mucous membranes.
- 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

· IARC (Internat	ional Agency for Research on Cancer)	
CAS: 108-88-3	Toluene	3
CAS: 67-63-0	Isopropanol	3
CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	1
CAS: 77-09-8	Phenolphthalein	28
· NTP (National	Toxicology Program)	
CAS: 77-09-8	Phenolphthalein	R
· OSHA-Ca (Occ	upational Safety & Health Administration)	
None of the ing	redients is listed.	

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · 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 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

- Danger to drinking water if even small quantities leak into the ground.
- · 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:

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

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· Uncleaned packagings:

• *Recommendation: Disposal must be made according to official regulations.*

• Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number	
DOT, IMDG, IATA	UN1993
UN proper shipping name DOT	Flammable liquids, n.o.s. (Toluene, Isopropanol
IMDG, IATA) FLAMMABLE LIQUID, N.O.S. (Toluene, Isopropanol)
Transport hazard class(es)	
DOT	
RAMABE LOOP	
Class	3 Flammable liquids
Label IMDG, IATA	3
Class	3 Flammable liquids 3
Label	5
Packing group DOT, IMDG, IATA	П
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code) EMS Number:	: 33 F-E,S-E
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

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	Solution

	(Contd. of page 9)
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
• UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL), 3, II

15 Regulatory information

Sara	tremely hazardous substances):	
	redients is listed.	
<i>Section 313 (Sp</i> <i>CAS: 108-88-3</i>	ecific toxic chemical listings):	
CAS: 67-63-0 CAS: 67-56-1	* *	
	Phenolphthalein	
	-	
	ubstances Control Act):	
Toluene		ACTIV
Isopropanol		ACTIV
Water		ACTIV
-	bsolute 200 Proof	ACTIV
Methanol		ACTIV
Phenolphthalein		ACTIV
Potassium Hydr	oxide	ACTIV
Hazardous Air	Pollutants	
CAS: 108-88-3	Toluene	
CAS: 67-56-1	Methanol	
Proposition 65		
Chemicals know	vn to cause cancer:	
CAS: 77-09-8	Phenolphthalein	
Chemicals know	vn to cause reproductive toxicity for females:	
None of the ing	redients is listed.	
Chemicals know	vn to cause reproductive toxicity for males:	
None of the ing		
Chemicals know	vn to cause developmental toxicity:	
CAS: 108-88-3	Toluene	
CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	

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A4

A4

A3

Trade name: Total Acid Number

Solution

CAS: 67-56-1 Methanol

· Carcinogenic categories

· EPA (Environmental Protection Agency)

CAS: 108-88-3 Toluene

· TLV (Threshold Limit Value)

CAS: 108-88-3 Toluene

CAS: 67-63-0 Isopropanol

CAS: 64-17-5 Ethyl Alcohol, Absolute 200 Proof

· 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



· Signal word Danger

· Hazard-determining components of labeling: Toluene Isopropanol · Hazard statements Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. · Precautionary statements *Obtain special instructions before use.* Do not handle until all safety precautions have been read and understood. 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. Do not breathe 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 swallowed: Immediately call a poison center/doctor. Specific treatment (see on this label). Do NOT induce vomiting. 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.*

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IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Get medical advice/attention if you feel unwell. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. In case of fire: Use CO2, powder or water spray to extinguish. 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.

· Contact:

- Date of Preparation / Last Revision:
- · Date of preparation / last revision
- Revision 1.2, 05/31/2024: Reviewed SDS for accuracy. MH/STN 05/31/2024
- · Abbreviations and acronyms:
- IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association 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) 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 **BEI:** Biological Exposure Limit Flammable Liquids 2: Flammable liquids – Category 2 Skin Irritation 2: Skin corrosion/irritation - Category 2 Eye Irritation 2A: Serious eye damage/eye irritation - Category 2A Toxic to Reproduction 2: Reproductive toxicity – Category 2 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) - Category 3 Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) - Category 2 Aspiration Hazard 1: Aspiration hazard – Category 1 \cdot * Data compared to the previous version altered.