Printing date 10/05/2017 Reviewed on 10/05/2017

### 1 Identification

· Product identifier

· Trade name: SFC Aromatic Std.

Prepared to ASTM D 5186

· Article number: AM391

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier: Aqua Solutions, Inc. 6913 Highway 225 DEER PARK, TX 77536 USA800-256-2586

· 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.



GHS06 Skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin 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).

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#### · Hazard pictograms









GHS02

GHS06 GHS07

#### · Signal word Danger

#### · Hazard-determining components of labeling:

n-Hexadecane, 99+%,

Toluene

1,2,3,4-tetrahydronaphthalene

#### · Hazard statements

Highly flammable liquid and vapor.

Toxic in contact with skin.

Causes skin irritation.

Suspected of causing cancer.

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.

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 exposed or concerned: Get medical advice/attention.

Call a POISON CENTER/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Specific treatment (see on this label).

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/attention.

Take off immediately all contaminated clothing and wash it before reuse.

*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.

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



Health = 2 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



- · 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 components:		
CAS: 544-76-3	n-Hexadecane, 99+%,	75.0%
CAS: 108-88-3	Toluene	20.0%
CAS: 119-64-2	1,2,3,4-tetrahydronaphthalene	3.0%
CAS: 91-20-3	Naphthalene	2.0%

### 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.

In case of irregular breathing or respiratory arrest provide artificial respiration.

- · 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. Then 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.

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- · 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).

Dispose contaminated material as waste according to item 13.

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: 544-76-3	n-Hexadecane, 99+%,	35 mg/m3
CAS: 108-88-3	Toluene	67 ppm
CAS: 119-64-2	1,2,3,4-tetrahydronaphthalene	1.6 ppm
CAS: 91-20-3	Naphthalene	15 ppm
· PAC-2:		
CAS: 544-76-3	n-Hexadecane, 99+%,	380 mg/m3
CAS: 108-88-3	Toluene	560 ppm
CAS: 119-64-2	1,2,3,4-tetrahydronaphthalene	17 ppm
CAS: 91-20-3	Naphthalene	83 ppm
· PAC-3:		
CAS: 544-76-3	n-Hexadecane, 99+%,	2,800 mg/m3
CAS: 108-88-3	Toluene	3700* ppm
CAS: 119-64-2	1,2,3,4-tetrahydronaphthalene	100 ppm
CAS: 91-20-3	Naphthalene	500 ppm

## 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.

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· 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 item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

# CAS: 108-88-3 Toluene PEL Long-term value: 200 ppm Ceiling limit value: 300; 500\* ppm \*10-min peak per 8-hr shift REL Short-term value: 560 mg/m<sup>3</sup>, 150 ppm Long-term value: 375 mg/m<sup>3</sup>, 100 ppm TLV Long-term value: 75 mg/m<sup>3</sup>, 20 ppm CAS: 91-20-3 Naphthalene PEL Long-term value: 50 mg/m<sup>3</sup>, 10 ppm

REL | Short-term value: 75 mg/m³, 15 ppm Long-term value: 50 mg/m³, 10 ppm TLV Long-term value: 52 mg/m<sup>3</sup>, 10 ppm Skin; BEI

# · Ingredients with biological limit values:

## CAS: 108-88-3 Toluene

BEI 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)

- · 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.

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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 skin.

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

#### · 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

## 9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid
Color: Clear

Odor: Organic

Odor threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:Undetermined.Boiling point/Boiling range:110 °C (230 °F)

• Flash point:  $4 \, ^{\circ}C \, (39 \, ^{\circ}F)$ 

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 205 °C (401 °F)

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Decomposition temperature:	Not determined.
Auto igniting:	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:	7.0 Vol %
· Vapor pressure at 20 °C (68 °F):	29 hPa (22 mm Hg)
Density at 20 °C (68 °F):	0.75052 g/cm <sup>3</sup> (6.263 lbs/gal)
Relative density	Not determined.
· Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/wate	e <b>r</b> ): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	23.0 %
VOC content:	23.0 %
	172.6 g/l / 1.44 lb/gl
Solids content:	2.0 %
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 (Acu	ATE (Acute Toxicity Estimate)		
Oral	LD50	4144 mg/kg (rat)	
Dermal	LD50	498 mg/kg	

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CAS: 544-	76-3 n-Hexadec	ane, 99+%,
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	3160 mg/kg (rabbit)
	Intraperitoneal	1546 mg/kg (mouse)
CAS: 108-	88-3 Toluene	
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative	LC50/4 h	5320 mg/l (mouse)
CAS: 119-	64-2 1,2,3,4-tetr	ahydronaphthalene
Oral	LD50	2860 mg/kg (rat)
Dermal	LD50	17 mg/kg (rabbit)
CAS: 91-2	0-3 Naphthalen	g.
Oral	LD50	490 mg/kg (rat)
Dermal	LD50	5000 mg/kg (rat)

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

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

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)		
CAS: 108-88-3	Toluene	3
CAS: 91-20-3	Naphthalene	2B
· NTP (National Toxicology Program)		
CAS: 91-20-3	Naphthalene	R
· 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.
- · 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.

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- · 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.

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

UN-Number DOT, IMDG, IATA	UN1993
UN proper shipping name DOT IMDG, IATA	Flammable liquids, n.o.s. (Toluene, Naphthalene, crude) FLAMMABLE LIQUID, N.O.S. (TOLUENE, NAPHTHALE) CRUDE)
Transport hazard class(es)	
DOT	
RAMMBLE LIQUE	
Class	3 Flammable liquids
Label	3
Class	3 Flammable liquids
Label	3
Packing group DOT, IMDG, IATA	II
Environmental hazards: Marine pollutant:	No
Special precautions for user	Warning: Flammable liquids
Danger code (Kemler):	336 FF G F
EMS Number: Stowage Category	F-E, <u>S-E</u> B

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· Transport/Additional information:

· DOT

· Quantity limitations

On passenger aircraft/rail: 1 L
On cargo aircraft only: 60 L

· IMDG

· Limited quantities (LQ)
· Excepted quantities (EQ)

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1993 FLAMMABLE LIQUIDS, N.O.S. (TOLUENE, NAPHTHALENE, CRUDE), 3, II

15 Regulatory in	formation			
· Safety, health an · Sara	nd environmental regulations/legislation specific for the substance or mixture			
· Section 355 (ext	remely hazardous substances):			
None of the ingre	edients is listed.			
· Section 313 (Spe	ecific toxic chemical listings):			
CAS: 108-88-3	Toluene			
CAS: 91-20-3	Naphthalene			
· TSCA (Toxic Su	bstances Control Act):			
All ingredients a	All ingredients are listed.			
· Proposition 65				
· Chemicals know	n to cause cancer:			
CAS: 91-20-3 N	aphthalene			
· Chemicals know	n to cause reproductive toxicity for females:			
None of the ingredients is listed.				
· Chemicals know	n to cause reproductive toxicity for males:			
None of the ingre	edients is listed.			
· Chemicals know	n to cause developmental toxicity:			

CAS: 108-88-3 Toluene

Carcinogenic categories

· Carcinogenic categories			
· EPA (Environmental Protection Agency)			
CAS: 108-88-3	Toluene	II	
CAS: 91-20-3	Naphthalene	C, CBD	
· TLV (Threshold Limit Value established by ACGIH)			
CAS: 108-88-3	Toluene	A4	
CAS: 91-20-3	Naphthalene	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).

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#### · Hazard pictograms









GHS02

GHS07

GHS06

· Signal word Danger

#### · Hazard-determining components of labeling:

n-Hexadecane, 99+%,

Toluene

1,2,3,4-tetrahydronaphthalene

#### · Hazard statements

Highly flammable liquid and vapor.

Toxic in contact with skin.

Causes skin irritation.

Suspected of causing cancer.

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.

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 exposed or concerned: Get medical advice/attention.

Call a POISON CENTER/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Specific treatment (see on this label).

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/attention.

Take off immediately all contaminated clothing and wash it before reuse.

*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.

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## 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

10-05-2017: review SDS for accuracy. STN

Revision 0.0, 08-03-2015: Creation Date for SDS. STN

10/05/2017 / -

#### · 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

 $REL: Recommended\ Exposure\ Limit$ 

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

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

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

US