Printing date 12/11/2017 Reviewed on 12/11/2017

1 Identification

· Product identifier

Trade name: Nitrogen Standard

100.0 ppm w/v in Naphtha

· Article number: MOT177

· 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.



GHS08 Health hazard

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).
- · Hazard pictograms







GHS02

GHS07

GHS08

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

Naphtha Solvents

· Hazard statements

Highly flammable liquid and vapor.

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(Contd. of page 1)

Causes skin irritation.

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

· 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 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.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/attention.

Take off 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.

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



Health = 1Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Fire = 3

- · 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: 8030-30-6 Naphtha Solvents

99.944%

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Trade name: Nitrogen Standard

100.0 ppm w/v in Naphtha

(Contd. of page 2)

· Table of Nonhazardous Ingredients

CAS: 110-86-1 | Pyridine | 0.0565%

4 First-aid measures

- · Description of first aid measures
- · 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.
- · 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 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:

Dilute with plenty of water.

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: 8030-30-6 | Naphtha Solvents | $1,200 \text{ mg/m}^3$ |
| CAS: 110-86-1 | Pyridine | <i>3 ppm</i> |
| · PAC-2: | | |
| CAS: 8030-30-6 | Naphtha Solvents | $6,700 \text{ mg/m}^3$ |
| CAS: 110-86-1 | Pyridine | 19 ppm |
| | | (Contd. on page 4) |

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Trade name: Nitrogen Standard

100.0 ppm w/v in Naphtha

(Contd. of page 3)

| | · PAC-3: | | |
|---|----------------|------------------|--------------|
| ľ | CAS: 8030-30-6 | Naphtha Solvents | 40,000 mg/m³ |
| | CAS: 110-86-1 | Pyridine | 3600* 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 from heat.

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.

· 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: 8030-30-6 Naphtha Solvents

PEL Long-term value: 400 mg/m³, 100 ppm REL Long-term value: 400 mg/m³, 100 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 skin.

Avoid contact with the eyes and skin.

- · Breathing equipment: Not required.
- · 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.

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(Contd. of page 4)

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 F nysicai ana chemic | 9 F nysicui una chemicui properiies | | | |
|--|-------------------------------------|--|--|--|
| · Information on basic ph · General Information | sical and chemical properties | | | |
| · Appearance: | | | | |
| Form: | Liquid | | | |
| Color | Clear | | | |

· Odor: Characteristic · Odor threshold: Not determined. Not determined. · pH-value:

· Change in condition

Melting point/Melting range: Undetermined. 80 °C (176 °F) Boiling point/Boiling range: 16 °C (60.8 °F) · Flash point:

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Heating may cause an explosion.

· Explosion limits:

Not determined. Lower: Not determined. Upper:

Not determined. · Vapor pressure:

· Density: Not determined. · Relative density Not determined. · Vapor density Not determined. Not determined.

· Solubility in / Miscibility with

· Evaporation rate

Fully miscible. Water:

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100.0 ppm w/v in Naphtha

| | (Conto | d. of page 5 |
|--------------------------------|--|--------------|
| Partition coefficient (n-octan | nol/water): Not determined. | |
| · Viscosity: | | |
| Dynamic: | Not determined. | |
| Kinematic: | Not determined. | |
| · Solvent content: | | |
| VOC content: | 0.00 % | |
| | 0.0 g/l / 0.00 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:
- · 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: Irritant

| · Carcinogenic categories | |
|---|---|
| · IARC (International Agency for Research on Cancer) | |
| CAS: 110-86-1 Pyridine | 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.

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Trade name: Nitrogen Standard

100.0 ppm w/v in Naphtha

(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:

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.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

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· DOT, IMDG, IATA

UN1268

3 Flammable liquids

· UN proper shipping name

 $\cdot DOT$

Petroleum distillates, n.o.s. (Naphtha Solvents)

· IMDG, IATA PETROLEUM DISTILLATES, N.O.S. (Naphtha Solvents)

- · Transport hazard class(es)
- $\cdot DOT$



· Class

· Label

· IMDG, IATA



· Class 3 Flammable liquids

· Label

· Packing group

· DOT, IMDG, IATA

(Contd. on page 8)

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Trade name: Nitrogen Standard

100.0 ppm w/v in Naphtha

| | (Contd. of page |
|--------------------------------------|--|
| Environmental hazards: | Not applicable. |
| Special precautions for user | Warning: Flammable liquids |
| Danger code (Kemler): | 33 |
| EMS Number: | 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 |
| 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 1268 PETROLEUM DISTILLATES, N.O.S. (NAPHTH |
| J | SOLVENTS), 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: 110-86-1 Pyridine

· TSCA (Toxic Substances Control Act):

Naphtha Solvents

Pyridine

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

CAS: 110-86-1 Pyridine

· 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:

None of the ingredients is listed.

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

(Contd. on page 9)

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Trade name: Nitrogen Standard

100.0 ppm w/v in Naphtha

(Contd. of page 8)

· TLV (Threshold Limit Value established by ACGIH)

CAS: 110-86-1 | Pyridine | A3

· 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

S07

GHS08

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

Naphtha Solvents

· Hazard statements

Highly flammable liquid and vapor.

Causes skin irritation.

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

· 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 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.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/attention.

Take off 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.

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:

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Trade name: Nitrogen Standard

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· Date of preparation / last revision

12-11-2017: review SDS for accuracy. STN

Revision 0.0, 11-02-2015, Creation date for SDS. STN

12/11/2017 / -

· 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)

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

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

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

Asp. Tox. 1: Aspiration hazard - Category 1