SAFETY DATA SHEET
ACCORDING TO 1907/2006/EC, 453/2010/EU, 2015/830/EU (REACH)

AQUA-STIC NUTECH

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier
Product Name: AQUA-STIC NUTECH
Product description: Adjuvant
Product Type: Liquid (Emulsifiable concentrate)

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant uses: Adjuvant sticker for use with various agrochemicals.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet
Rolfes Agri (Pty) Ltd
288 Mundt Street
Waltloo
Pretoria
South Africa
Tel: +27(0)12 803 0145
Fax: +27(0)12 803 8418

1.4 Emergency telephone number
National advisory body/Poison Centre
Telephone number: SOUTH AFRICA
Griffon Poison Information Centre
(24 Hour Poisoning Emergency Helpline)
+27(0)82 446 8946
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:
CLP Regulation (EC) no 1272/2008:
Classification of this product has been carried out in accordance with CLP Regulation (EC) no 1272/2008.
Asp. Tox. 1: Aspiration Toxicity, Category 1, H304
Skin Irrit. 2: Skin Irritant, Category 2, H315
Skin Sens. 1: Skin Sensitising, Category 1, H317
Eye Dam. 1: Eye Damage, Category 1, H318
Aquatic Chronic 1: Aquatic Chronic Category 1, H410

2.2 Label elements
CLP Regulation (EC) no 1272/2008:

Hazard pictogram(s): 

Signal word: Danger

Hazard statement(s):
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H410 - Very toxic to aquatic life with long-lasting effects

Precautionary statement(s):
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P310 - Immediately call a POISON CENTER or doctor/physician.
P362 - Take off contaminated clothing and wash before reuse.
P363 - Wash contaminated clothing before reuse.
P331 - Do NOT induce vomiting.
P391 - Collect spillage.
P405 - Store locked up.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

2.3 Other hazards
Non-applicable

SECTION 3: Composition/information on ingredients

3.1 Substance:
Non-applicable

3.2 Mixture:
Chemical description: Multi-constituent substance
AQUA STIC NUTECH

Component(s):

<table>
<thead>
<tr>
<th>Name:</th>
<th>Active ingredient: Poly-1-p-menthene</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS:</td>
<td>34363-01-4</td>
</tr>
<tr>
<td>EC:</td>
<td>417-870-6</td>
</tr>
<tr>
<td>Concentration:</td>
<td>84 – 86%</td>
</tr>
<tr>
<td>Classification according to Regulation 1272/2008</td>
<td>Skin Irrit 2: H315 - Causes skin irritation</td>
</tr>
<tr>
<td></td>
<td>Skin Sens. 1: H317 - May cause an allergic skin reaction.</td>
</tr>
<tr>
<td></td>
<td>Aquatic Acute 1: H400 - Very toxic to aquatic life</td>
</tr>
<tr>
<td></td>
<td>Aquatic Chronic 1: H410 - Very toxic to aquatic life with long-lasting effects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name:</th>
<th>Inert co-formulants (Surfactant and Solvent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS:</td>
<td>78330-21-9 and 64742-94-5</td>
</tr>
<tr>
<td>EC:</td>
<td>616-609-5 and 265-198-5</td>
</tr>
<tr>
<td>Concentration:</td>
<td>13 - 15%</td>
</tr>
<tr>
<td>Classification according to Regulation 1272/2008</td>
<td>Eye Dam. 1: H318 - Causes serious eye damage</td>
</tr>
<tr>
<td></td>
<td>Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways</td>
</tr>
</tbody>
</table>

SECTION 4: First Aid Measures

4.1 Description of first aid measures

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:
Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Do NOT give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person at rest and warm. Treat symptomatically and supportively as and when required. Obtain medical advice if necessary.

By skin contact:
Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists. Wash clothing before re-use.

By eye contact:
Immediately flush eyes with lukewarm water or saline solution for at least 15 minutes, lifting lower and upper eyelids occasionally. Check for and remove any contact lenses after 5 minutes. Get medical attention if necessary.

By ingestion / aspiration:
Have victim rinse mouth thoroughly with water. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits, rinse mouth. Never give anything by mouth to an unconscious person. Qualified medical personnel should perform administration of oxygen. Seek medical advice if necessary.
SECTION 5: Firefighting measures

5.1 Fire Extinguishing Media

Suitable extinguishing media:
Use dry chemical, Carbon Dioxide, dry powder or alcohol-resistant foam.

Unsuitable extinguishing media:
No information available.

5.2 Special hazards arising from the substance or mixture:
Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products:
None known, but may produce oxides of carbon

5.3 Additional provisions:
Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Do not inhale fumes. Avoid contact with skin, eyes or clothes. Ventilate area of leak or spill. Wear appropriate personal protective equipment.

6.2 Environmental precautions:
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Collect spillage.

6.3 Methods and materials for containment and cleaning up

Spills:
Absorb with sand or an inert dry material and put in a suitable container for reclamtion or disposal.

Large Spills:
Dyke far ahead of liquid spills for later disposal. Absorb with sand or an inert dry material and put in a suitable container for reclamtion or disposal. Prevent entry of the substance into waterways, sewers, basements or confined areas.

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1 Precautions for safe handling:
A. Precautions for safe manipulation
Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.
B.- Technical recommendations for the prevention of fires and explosions
   Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

C.- Technical recommendations to prevent ergonomic and toxicological risks
   Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks
   It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 **Conditions for safe storage, including any incompatibilities:**
   Keep out of reach of unauthorized persons, children and animals. Store in its original labelled container in shaded, well-ventilated area. Store in dry area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

   Technical measures for storage
   Minimum Temp.: 5 ºC
   Maximum Temp.: 30 ºC
   Maximum time: 24 Months

7.3 **Specific end use(s)**
   Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance.

8.1 **Control parameters**
   No occupational exposure limits have been established.

8.2 **Exposure controls**

   **Appropriate engineering controls:**
   Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

   **Individual protection measures**

   **Hygiene measures:**
   Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

   **Eye/face protection:**
   Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Possible: safety glasses with side-shields

   **Skin protection**

   **Hand protection:**
   Protective gloves against minor risks.

   **Body protection:**
   Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

   **Other skin protection:**
   Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection:
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.

Environmental exposure controls:
In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. No significant release into the air is expected.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
For complete information, please refer to product datasheet.

Appearance
Physical state: Viscous Liquid
Colour: Green
Odour: Strong petroleum like odour

Volutility:
Boiling point at atmospheric pressure: Not determined
Vapour pressure at 20 °C: Not determined
Vapour pressure at 50 °C: Not determined
Evaporation rate at 20 °C: Not determined

Product description:
Density at 20 ºC: 0.95
Relative density at 20 ºC: Not determined
Dynamic viscosity at 20 ºC: Not determined
Kinematic viscosity at 20 ºC: Not determined
Kinematic viscosity at 40 ºC: Not determined
pH: Not determined
Vapour density at 20 ºC: Not determined
Partition coefficient n-octanol/water 20 ºC: Not determined
Solubility in water at 20 ºC: Soluble in water
Solubility properties: Not determined
Decomposition temperature: Not determined
Melting point/freezing point: Not determined
Explosive properties: Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
Oxidising properties: Not determined
Flammability:
Flash Point: > 100 ºC (not considered flammable)
Autoignition temperature: Not determined
Lower flammability limit: Not determined
Upper flammability limit: Not determined

9.2 Other information
No additional information.
SECTION 10: Stability and reactivity

10.1 Reactivity:
No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:
Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:
Will not occur under normal conditions of storage, handling and use.

10.4 Conditions to avoid:
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Shock and friction</th>
<th>Contact with air</th>
<th>Increase in temperature</th>
<th>Sunlight</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10.5 Incompatible materials:

<table>
<thead>
<tr>
<th>Acids</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Oxidizing agents</td>
</tr>
</tbody>
</table>

10.6 Hazardous decomposition products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Calculated Formulation Toxicity
- Acute Dermal LD50: > 2000 mg/kg (rat)
- Acute Oral LD50: > 4500 mg/kg (rat)

Ingestion (acute effect): Does contain substances classified as dangerous for this effect. Refer to Section 2.
Inhalation (acute effect): Does contain substances classified as dangerous for this effect. Refer to Section 2.
Contact with the skin and the eyes (acute effect): Does contain substances classified as dangerous for this effect. Refer to Section 2.
Carcinogenicity: Does contain substances classified as dangerous for this effect. Refer to Section 2.
Mutagenicity: Does contain substances classified as dangerous for this effect. Refer to Section 2.
Respiratory: Does contain substances classified as dangerous for this effect. Refer to Section 2.
Aspiration hazard: Does contain substances classified as dangerous for this effect. Refer to Section 2.

SECTION 12: Ecological information

12.1 The information in this section contains generic advice and guidance.

Large spills could possible damage vegetation.
Contamination of waterways could cause fish kills.
Prevent spread of runoff into drains, storm sewers, and ditches that lead to waterways.
SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted.

13.1 Waste treatment methods

**Product**

Methods of disposal:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

**Packaging**

Methods of disposal:
TRIPLE RINSE empty containers in the following manner. Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of 10 % of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner. Recycle the containers via accredited recyclers.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th></th>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway transport (AND/ADNR)</th>
<th>Sea Transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14.1 UN Number</strong></td>
<td>3082</td>
<td>3082</td>
<td>3082</td>
<td>3082</td>
</tr>
<tr>
<td><strong>14.2 UN proper shipping name</strong></td>
<td>Environmentally hazardous substance, liquid, N.O.S (Terpenoid)</td>
<td>Environmentally hazardous substance, liquid, N.O.S (Terpenoid)</td>
<td>Environmentally hazardous substance, liquid, N.O.S (Terpenoid)</td>
<td>Environmentally hazardous substance, liquid, N.O.S (Terpenoid)</td>
</tr>
<tr>
<td><strong>14.3 Transport hazard class(es)</strong></td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>14.4 Packing group</strong></td>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td><strong>14.5 Environmental hazards</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>14.6 Special precautions for user</strong></td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</strong></td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Other National regulations:
SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes.

15.2 Chemical Safety Assessment:
The supplier has not carried out evaluation of chemical safety.

SECTION 16: Other information

Legislation related to safety data sheets:
This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) Nº 1907/2006 (Regulation (EU) Nº 453/2010, Regulation (EC) Nº 2015/830)

Modifications related to the previous security card which concerns the ways of managing risks.:
Non-applicable

Texts of the legislative phrases mentioned in section 2:
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Texts of the legislative phrases mentioned in section 3:
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

CLP Regulation (EC) nº 1272/2008:
Asp. Tox. 1: Aspiration Toxicity, Category 1, H304
Skin Irrit. 2: Skin Irritant, Category 2, H315
Skin Sens. 1: Skin Sensitising, Category 1, H317
Eye Dam. 1: Eye Damage, Category 1, H318
Aquatic Chronic 1: Aquatic Chronic Category 1, H410
Muta. 1B: Mutagenic, Category 1B, H340
Carc. 1B: Carcinogenic, Category 1B, H350

Advice related to training:
Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:
http://echa.europa.eu
http://eur-lex.europa.eu

Relevant P-, H- and EUH-phrases (number and full text)
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H410 - Very toxic to aquatic life with long-lasting effects
H340 - May cause genetic defects
H350 - May cause cancer
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P310 - Immediately call a POISON CENTER or doctor/physician.
P362 - Take off contaminated clothing and wash before reuse.
P363 - Wash contaminated clothing before reuse.
P331 - Do NOT induce vomiting.
P391 - Collect spillage.
P405 - Store locked up.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
CL50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
KOC: PARTITION COEFFICIENT OF ORGANIC CARBON

Date of revision : 15/11/2019
Version : 5

Notice to reader
DISCLAIMER AND LIMITATION OF LIABILITY

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS.
This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.