SAFETY DATA SHEET
AMMONIA CONDITIONING REAGENT

1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>AMMONIA CONDITIONING REAGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product number</td>
<td>YAT1707</td>
</tr>
</tbody>
</table>

Recommended use of the chemical and restrictions on use

Application  Testing water

Details of the supplier of the safety data sheet

Supplier  PALINTEST USA
1455 JAMIKE AVENUE
ERLANGER
KENTUCKY
41018
USA
859 341 7423
TOLL FREE 800 835 9629
859 341 2106
info@palintestusa.com

Emergency telephone number

Emergency telephone  +44 (0)207 858 1228 (24hr)
National emergency telephone  +44 (0)207 858 1228 (24hr)

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards  Not Classified
Health hazards  Acute Tox. 4 - H302 Skin Corr. 1B - H314
Environmental hazards  Not Classified

Label elements

Pictogram

Signal word  Danger
Hazard statements  H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
AMMONIA CONDITIONING REAGENT

Precautionary statements
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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 contents/container in accordance with local regulations.

Contains
LITHIUM HYDROXIDE

Other hazards
This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM TARTRATE DIHYDRATE</td>
<td>80-100%</td>
</tr>
<tr>
<td>CAS number: 6106-24-7</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 - H302</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LITHIUM HYDROXIDE</td>
<td>10-30%</td>
</tr>
<tr>
<td>CAS number: 1310-66-3</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 - H302</td>
<td></td>
</tr>
<tr>
<td>Skin Corr. 1B - H314</td>
<td></td>
</tr>
</tbody>
</table>

The Full Text for all Hazard Statements are Displayed in Section 16.

Composition comments
The Data Shown is in accordance with the latest EC Directives.

4. First-aid measures

Description of first aid measures

Inhalation
 unlikely route of exposure as the product does not contain volatile substances.

Ingestion
Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact
Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact
Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

Most important symptoms and effects, both acute and delayed

Inhalation
This is unlikely to occur but symptoms similar to those of ingestion may develop.

Ingestion
May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin contact
Burns can occur.

Eye contact
May cause blurred vision and serious eye damage.
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Indication of immediate medical attention and special treatment needed

Notes for the doctor  Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media  Use fire-extinguishing media suitable for the surrounding fire.

Special hazards arising from the substance or mixture

Specific hazards

Hazardous combustion products  No known hazardous decomposition products.

Advice for firefighters

Protective actions during firefighting  No specific firefighting precautions known.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions  Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental precautions

Environmental precautions  Not considered to be a significant hazard due to the small quantities used. The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Methods and material for containment and cleaning up

Methods for cleaning up  Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if possible without risk. DO NOT touch spilled material! Absorb in vermiculite, dry sand or earth and place into containers.

Reference to other sections  Wear protective clothing as described in Section 8 of this safety data sheet.

7. Handling and storage

Precautions for safe handling

Usage precautions  Good personal hygiene procedures should be implemented.

Conditions for safe storage, including any incompatibilities

Storage precautions  Store in tightly-closed, original container in a dry and cool place. Keep separate from food, feedstuffs, fertilizers and other sensitive material.

Specific end use(s)

Specific end use(s)  The identified uses for this product are detailed in Section 1.2.

8. Exposure Controls/personal protection

Ingredient comments  ACGIH = US Standard. Threshold Limit Values (2005), ACGIH, by the American Conference on Governmental Industrial Hygienists.

Exposure controls
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**Protective equipment**

- **Eye/face protection**: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.
- **Hand protection**: It is recommended that chemical-resistant, impervious gloves are worn. Wear protective gloves made of the following material: Nitrile rubber.
- **Other skin and body protection**
- **Hygiene measures**
- **Respiratory protection**: No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

### 9. Physical and Chemical Properties

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Dusty powder.</td>
</tr>
<tr>
<td>Color</td>
<td>White.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Other information</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

- **Reactivity**: Reacts violently with strong acids.
- **Stability**: Stable under the prescribed storage conditions.
- **Possibility of hazardous reactions**: No data available.
- **Conditions to avoid**: Avoid contact with acids.
- **Materials to avoid**: Strong acids.
- **Hazardous decomposition products**: Heating may generate the following products: Toxic and corrosive gases or vapors.

### 11. Toxicological information

**Information on toxicological effects**

- **Toxicological effects**: No data available.
- **Acute toxicity - oral**
  - ATE oral (mg/kg): 476.78716379

### 12. Ecological Information
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Ecotoxicity
The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Toxicity
No data available.

Persistence and degradability
There are no data on the degradability of this product.

Bioaccumulative potential
No data available on bioaccumulation.

Mobility in soil
The product is soluble in water.

Results of PBT and vPvB assessment
This substance is not classified as PBT or vPvB according to current EU criteria.

Other adverse effects
No data available.

13. Disposal considerations
Disposal methods
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information
Road transport notes
The product is considered hazardous goods in "excepted quantities" as packaged as per ADR European agreement, concerning the international carriage of dangerous goods by road section 3.5.1.4

Air transport notes
This product is considered as Dangerous Goods Permitted in Excepted Quantities as packaged as per Section 2.6.2.2 of the IATA Dangerous Goods Regulations.

UN Number
UN No. (DOT) 2680
UN No. (IMDG) 2680
UN No. (ICAO) 2680

UN proper shipping name
Proper shipping name (DOT) LITHIUM HYDROXIDE
Proper shipping name (IMDG) LITHIUM HYDROXIDE
Proper shipping name (ICAO) LITHIUM HYDROXIDE

Transport hazard class(es)
DOT hazard class 8
DOT hazard label Corrosive
TDG class 8
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TDG label  8
IMDG Class  8
ICAO class/division  8

Transport labels

Packing group
DOT pack group  II
IMDG packing group  II
ICAO packing group  II

Environmental hazards
Environmentally Hazardous Substance
No.

Special precautions for user
EmS  F-A, S-B

Transport in bulk according to  Not applicable.
Annex II of MARPOL 73/78
and the IBC Code

15. Regulatory information

US Federal Regulations
CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed.

SARA 313 Emission Reporting
None of the ingredients are listed.

CAA Accidental Release Prevention
None of the ingredients are listed.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed.

Massachusetts "Right To Know" List
None of the ingredients are listed.

Rhode Island "Right To Know" List
None of the ingredients are listed.

Minnesota "Right To Know" List
None of the ingredients are listed.

New Jersey "Right To Know" List
None of the ingredients are listed.
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Pennsylvania "Right To Know" List
None of the ingredients are listed.

Inventories
Canada - DSL/NDSL
All the ingredients are listed or exempt.

US - TSCA
All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed.

16. Other information

Issued by L. Morgan
Revision date 5/3/2016
Revision 9
Supersedes date 10/14/2015
SDS status Approved.
Hazard statements in full
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H318 Causes serious eye damage.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.