1.1 Product identifiers

Product Name: 100% Tacsimate™ pH 4.0
Product Number: HR2-823
Product type: Liquid
REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: For research use only. Not for drug, household, or other use.

1.3 Details of the supplier of the Safety Data Sheet

Company: Hampton Research
34 Journey
Aliso Viejo, CA 92656-3317
United States
Telephone: 949 425 1321
Fax: 949 425 1611
Fax Technical Support is available 24 hours a day.
e-mail: tech@hrmail.com
e-mail Technical Support is available 24 hours a day.

1.4 Emergency telephone number

Emergency phone: 949 425 1321
For CHEMTREC Assistance: 800 424 9300
For CHEMTREC Assistance: 703 527 3887 (International)

This is a summary SDS for a kit, for the full SDS for each of the components listed in section 16 please visit our website.

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
see SECTION 16

Classification according to EU Directives 67/548/EEC or 1999/45/EC
see SECTION 16

Additional information:
Relevant R-phrase(s), S-phrase(s), GHS pictogram(s), Hazard statement(s), and Precautionary statement(s) please see SECTION 16
SECTION 4: First Aid Measures

4.1 Description of first aid measures

General Advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments
No specific treatment.
SECTION 5: Fire Fighting Measures

5.1 Extinguishing media
   Suitable extinguishing media
   Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

   Unsuitable extinguishing media
   None known

5.2 Special hazards arising from the substance or mixture
   No data available

5.3 Advice for firefighters
   Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further Information
   No data available

SECTION 6: Accidental Release Measures

6.1 Personal Precautions
   Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

6.2 Environmental precautions
   Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
   Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
   For disposal see SECTION 8 and 13.

SECTION 7: Handling and Storage

7.1 Personal Precautions
   Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
   Provide appropriate exhaust ventilation at places where dust is formed.
   See Section 8 for additional information on hygiene measures. For precautions see section 16.

7.2 Conditions for safe storage, including any incompatibilities
   Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
   Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end uses
   A part from the uses mentioned in section 1.2 no other specific uses are stipulated.
SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters
Components with workplace control parameters
Consult a physician. Show this safety data sheet to the doctor in attendance.

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment
Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental Exposure Controls
See SECTION 6

SECTION 9: Physical and Chemical Properties

No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
No data available

10.3 Possibility of hazardous reactions
No data available
(CONTINUED) - SECTION 10: Stability and Reactivity

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
Other decomposition products - no data available

SECTION 11: Toxicological Information

Refer to component SDS

SECTION 12: Ecological Information

Refer to component SDS

SECTION 13: Disposal Considerations

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transportation Information

14.1 UN number
ADR/RID: 3316
IMDG: 3316
IATA: 3316

14.2 UN proper shipping name
ADR/RID: CHEMICAL KIT
IMDG: CHEMICAL KIT
IATA: Chemical kit

14.3 Transport hazard class(es)
ADR/RID: -
IMDG: -
IATA: -

14.4 Packaging group
ADR/RID: -
IMDG: -
IATA: -

14.5 Environmental hazards
ADR/RID: No
IMDG Marine pollutant: No
IATA: No
SECTION 15: Regulatory Information

This safety data sheet complies with the requirements of Regulation (EC) No 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
No data available

SECTION 16: Other Information

Kit Components

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>Catalog #</th>
<th>[CAS]</th>
<th>R-Phrase</th>
<th>S-Phrase</th>
<th>GHS Pictogram</th>
<th>Hazard Statement</th>
<th>Precautionary Statement</th>
<th>WKG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium citrate tribasic</td>
<td>HR2-759</td>
<td>3458-72-8</td>
<td>36/37/38</td>
<td>26-36</td>
<td>GHS07</td>
<td>H315-H319-H335</td>
<td>P261-P305 + P351 + P338</td>
<td>1</td>
</tr>
<tr>
<td>Malonic acid</td>
<td>HR2-747</td>
<td>141-82-2</td>
<td>22-41</td>
<td>26-36/39</td>
<td>GHS05, GHS07</td>
<td>H318</td>
<td>P280-P305 + P351 + P338</td>
<td>1</td>
</tr>
<tr>
<td>Sodium acetate trihydrate</td>
<td>HR2-569</td>
<td>6131-90-4</td>
<td>3</td>
<td>26-36</td>
<td>GHS05</td>
<td>H318</td>
<td>P280-P305 + P351 + P338</td>
<td>3</td>
</tr>
<tr>
<td>Sodium formate</td>
<td>HR2-547</td>
<td>141-53-7</td>
<td>3</td>
<td>26-36</td>
<td>GHS05</td>
<td>H318</td>
<td>P280-P305 + P351 + P338</td>
<td>3</td>
</tr>
</tbody>
</table>

For additional information, please refer to the individual Material Safety Data Sheets(s).

Relevant R-phrase(s), S-phrase(s), GHS Pictogram(s), Hazard statement(s), and Precautionary statement(s)

Risk Phrase(s)
R 22 : Harmful if swallowed
R 36/37/38 : Irritating to eyes and respiratory system, respiratory system and skin
R 37/38 : Irritating to respiratory system and skin
R 41 : Risk of serious damage to eyes.

Safety Phrase(s)
S 26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S 36 : Wear suitable protective clothing and seek medical advice
S 36/39 : Wear suitable protective clothing and eye/face protection
S 39 : Wear eye/face protection
(CONTINUED) - SECTION 16: Other Information

GHS Pictogram

<table>
<thead>
<tr>
<th>GHS05</th>
<th>Corrosion</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS07</td>
<td>Acute toxicity</td>
</tr>
</tbody>
</table>

Hazard statement(s)

H302 : Harmful if swallowed.
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H335 : May cause respiratory irritation.

Precautionary statement(s)

P261 : Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 : Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

DISCLAIMER

• For R&D use only. Not for drug, household, or other use.

WARRANTY

• The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of this product. Hampton Research Corp., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.
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