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

1.1 Product identifiers
Product Name: 1.0 M TRIS hydrochloride
Product Number: HR2-579
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.
CAS Number: 1185-53-1

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances.

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
Telephone technical support is available 8:00 a.m. to 4:30 p.m. USA Pacific Standard Time.
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)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
This substance is not classified as dangerous according to Directive 67/548/EEC.

2.2 Label elements
Not a hazardous substance or mixture.

2.3 Other hazards: none
3.1 Substances

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>TRIS HCl, or Trizma hydrochloride, or Tris(hydroxymethyl)aminomethane hydrochloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>NH₂C(CH₂OH)₃·HCl or C₄H₁₁NO₃·HCl</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>157.60</td>
</tr>
<tr>
<td>CAS Number</td>
<td>1185-53-1</td>
</tr>
<tr>
<td>EC Number</td>
<td>214-684-5</td>
</tr>
</tbody>
</table>

No components need to be disclosed according to the applicable regulations.

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 as a precaution 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. The most important known symptoms and effects are described in the labeling (see Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5.1 Extinguishing media

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

Unsuitable extinguishing media
None known
(CONTINUED) - SECTION 5: Fire Fighting Measures

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, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

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. Keep in suitable, closed containers for disposal. Soak up with inert absorbent material and dispose of as hazardous waste.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling And Storage

7.1 Personal Precautions
Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

7.3 Specific end uses
Apart 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
Contains no substances with occupational exposure limit values.
Appropriate engineering controls
General industrial hygiene practice.

Personal protective equipment

Eye/face protection
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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Do not let product enter drains.
SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: Fine Crystals with Lumps
   Color: Colorless

b) Odor
   no data available

c) Odor Threshold
   no data available

d) pH
   4.0 at 25°C

e) Melting point/freezing point
   149.3°C (dec.)(lit.)

f) Initial boiling point and boiling range
   no data available

g) Flash point
   no data available

h) Evaporation rate
   no data available

i) Flammability (solid, gas)
   no data available

j) Upper/lower flammability or explosive limits
   no data available

k) Vapor pressure
   no data available

l) Vapor density
   no data available

m) Relative density
   no data available

n) Water solubility
   no data available

o) Partition coefficient:
   noctanol/water
   no data available

p) Autoignition temperature
   no data available

q) Decomposition temperature
   no data available

r) Viscosity
   no data available

s) Explosive properties
   no data available

t) Oxidizing properties
   no data available

9.2 Other safety information
   no data available

SECTION 10: Stability And Reactivity

10.1 Reactivity
   no data available

10.2 Chemical stability
   Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
   no data available

10.4 Conditions to avoid
   Exposure to moisture.

10.5 Incompatible materials
   Bases, Oxidizing agents
SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - no data available
LD50 Inhalation - no data available
LD50 Dermal - no data available

Skin irritation / corrosion
no data available

Serious eye damage/eye irritation
Eyes - rabbit
Result: Mild eye irritation

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
Not mutagenic in Ames Test.

Chronic exposure
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional information
RTECS: N/A
SECTION 12: Ecological Information

12.1 Toxicity
Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia - > 100 mg/l - 48 h
Toxicity to algae
EC50 - other microorganisms - > 1.000 mg/l - 3 h

12.2 Persistence and degradability
Biodegradability Remarks: Readily biodegradable, according to appropriate OECD test.

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects
no data available

SECTION 13: Disposal Considerations

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transportation Information

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

14.2 UN proper shipping name
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

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

14.4 Packaging group
ADR/RID: - IMDG: - IATA: -
(CONTINUED) - SECTION 14: Transportation Information

14.5 Environmental hazards
ADR/RID: No                      IMDG Marine pollutant: no  IATA: No

14.6 Special precautions for user
No data available

SECTION 15: Regulatory Information

This safety datasheet 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
For this product a chemical safety assessment was not carried out.

SECTION 16: Other Information

DISCLAIMER
For research 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.
License granted to make unlimited paper copies for internal use only.

© 1991-2020 Hampton Research Corp.