1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers
Product name : Trimethylindium without product grade, container or fill weight
Product Number : TMISEP
Brand : SAFC Hitech®
CAS-No. : 3385-78-2

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

1.3 Details of the supplier of the safety data sheet
Company : SAFC Hitech
1429 Hilldale Avenue
HAVERHILL, MA, USA

Telephone : +1 978 374 5200
Fax : +1 978 374 6474

1.4 Emergency telephone number
Emergency Phone # : 800 424 9300 Hitechinfo@Sial.com

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
- Flammable liquids (Category 2), H225
- Pyrophoric liquids (Category 1), H250
- Substances and mixtures, which in contact with water, emit flammable gases (Category 2), H261
- Skin corrosion (Category 1B), H314
- Serious eye damage (Category 1), H318
- Acute aquatic toxicity (Category 1), H400
- Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word : Danger
Hazard statement(s)
H225 : Highly flammable liquid and vapour.
H250 : Catches fire spontaneously if exposed to air.
H261 : In contact with water releases flammable gases.
H314 : Causes severe skin burns and eye damage.
H410 : Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)
P210    Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P222    Do not allow contact with air.
P223    Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231 + P232    Handle under inert gas. Protect from moisture.
P233    Keep container tightly closed.
P240    Ground/bond container and receiving equipment.
P241    Use explosion-proof electrical/ventilating/lighting/equipment.
P242    Use only non-sparking tools.
P243    Take precautionary measures against static discharge.
P264    Wash skin thoroughly after handling.
P273    Avoid release to the environment.
P280    Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331    IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P334    IF ON SKIN: Immerse in cool water/wrap in wet bandages.
P303 + P361 + P353    IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340    IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338    IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310    Immediately call a POISON CENTER or doctor/physician.
P321    Specific treatment (see supplemental first aid instructions on this label).
P335 + P334    Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages.
P363    Wash contaminated clothing before reuse.
P370 + P378    In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391    Collect spillage.
P402 + P404    Store in a dry place. Store in a closed container.
P403 + P235    Store in a well-ventilated place. Keep cool.
P405    Store locked up.
P422    Store contents under inert gas.
P501    Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
Reacts violently with water.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
Synonyms: trimethylindium EpiPure grade solution 470 bubbler fill volume 500 gm trimethylindium TMIS EpiPure

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trimethylindium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>3385-78-2</td>
<td>Pyr. Sol. 1; Water-react. 2; Skin Corr. 1B; Eye Dam. 1; H250, H261, H314</td>
</tr>
<tr>
<td>EC-No.</td>
<td>222-200-9</td>
<td>&gt;= 70 - &lt; 90 %</td>
</tr>
<tr>
<td>Dodecyldimethylamine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>112-18-5</td>
<td>Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H302,</td>
</tr>
<tr>
<td>EC-No.</td>
<td>203-943-8</td>
<td>&gt;= 10 - &lt; 20 %</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

4.1 Description of first aid measures

**General advice**
Move out of dangerous area. 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**
Take off contaminated clothing and shoes immediately. 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. Continue rinsing eyes during transport to hospital.

**If swallowed**
Do NOT induce vomiting. 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
The most important known symptoms and effects are described in the labelling (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. FIREFIGHTING MEASURES

5.1 Extinguishing media

**Suitable extinguishing media**
Dry powder.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx), Indium/indium oxides.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid inhalation of vapour or mist.

H314, H318, H410
For the full text of the H-Statements mentioned in this Section, see Section 16.
Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
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. Never allow product to get in contact with water during storage. Handle and store under inert gas. Reacts violently with water. It reacts violently with all types of oxidizers. Air-, heat-, and moisture-sensitive.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trimethylindium</td>
<td>3385-78-2</td>
<td>TWA</td>
<td>0.100000 mg/m3</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pulmonary edema</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Pneumonitis</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Dental erosion</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Malaise</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.100000 mg/m3</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.1 mg/m3</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pulmonary edema</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>TWA</td>
<td>0.1 mg/m3</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
</tbody>
</table>

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
Tightly fitting safety goggles. Faceshield (8-inch minimum). 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. Protective gloves against thermal risks

Body Protection
Complete suit protecting against chemicals. Flame retardant antistatic protective 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
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**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

**a) Appearance**  
Form: Slurry

**b) Odour**  
No data available

**c) Odour Threshold**  
No data available

**d) pH**  
No data available

**e) Melting point/freezing point**  
Melting point/range: 88.4 °C (191.1 °F)

**f) Initial boiling point and boiling range**  
133.8 °C (272.8 °F) at 1,013 hPa (760 mmHg)

**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) Vapour pressure**  
3.3 hPa (2.5 mmHg) at 25 °C (77 °F)  
20 hPa (15 mmHg) at 50 °C (122 °F)

**l) Vapour density**  
No data available

**m) Relative density**  
1.568 g/cm³

**n) Water solubility**  
Decomposes in contact with water.

**o) Partition coefficient: n-octanol/water**  
No data available

**p) Auto-ignition temperature**  
The substance or mixture is pyrophoric with the category 1.

**q) Decomposition temperature**  
140 °C (284 °F) - To avoid thermal decomposition, do not overheat. Heating can release hazardous gases.

**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

### 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
React violently with water. Vapours may form explosive mixture with air.

#### 10.4 Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture
10.5 Incompatible materials
Water, Polyhalogenated compounds. These compounds ignite in air and may react explosively with water, Oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available (Trimethylindium)

Inhalation: No data available (Trimethylindium)
Dermal: No data available (Trimethylindium)
No data available (Trimethylindium)

Skin corrosion/irritation
No data available (Trimethylindium)

Serious eye damage/eye irritation
No data available (Trimethylindium)

Respiratory or skin sensitisation
No data available (Trimethylindium)

Germ cell mutagenicity
No data available (Trimethylindium)

Carcinogenicity
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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available (Trimethylindium)

No data available (Trimethylindium)

Specific target organ toxicity - single exposure
No data available (Trimethylindium)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available (Trimethylindium)

Additional Information
RTECS: Not available
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Trimethylindium)
12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available (Trimethylindium)

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
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3394  Class: 4.2 (4.3)  Packing group: I
Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Trimethylindium, Dodecyldimethylamine)
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG
UN number: 3394  Class: 4.2 (4.3)  Packing group: I  EMS-No: F-G, S-M
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (Trimethylindium, Dodecyldimethylamine)

IATA
UN number: 3394  Class: 4.2 (4.3)
Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Trimethylindium, Dodecyldimethylamine)
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Fire Hazard, Reactivity Hazard, Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trimethylindium</td>
<td>3385-78-2</td>
<td></td>
</tr>
<tr>
<td>Dodecyldimethylamine</td>
<td>112-18-5</td>
<td></td>
</tr>
</tbody>
</table>

New Jersey Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
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<tr>
<td>Dodecyldimethylamine</td>
<td>112-18-5</td>
<td></td>
</tr>
</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

<table>
<thead>
<tr>
<th>Acute Tox.</th>
<th>Acute toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Acute</td>
<td>Acute aquatic toxicity</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Chronic aquatic toxicity</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Serious eye damage</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H250</td>
<td>Catches fire spontaneously if exposed to air.</td>
</tr>
<tr>
<td>H261</td>
<td>In contact with water releases flammable gases.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Pyr. Sol.</td>
<td>Pyrophoric solids</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Skin corrosion</td>
</tr>
<tr>
<td>Water-react.</td>
<td>Substances and mixtures, which in contact with water, emit flammable gases</td>
</tr>
</tbody>
</table>

HMIS Rating

<table>
<thead>
<tr>
<th>Health hazard:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Health Hazard:</td>
<td>4</td>
</tr>
<tr>
<td>Flammability:</td>
<td>4</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>3</td>
</tr>
</tbody>
</table>

NFPA Rating

| Health hazard:  | 3  |
| Fire Hazard:    | 3  |
| Reactivity Hazard: | 3  |

Further information
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