2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
<th>Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements
Hazard statements
Causes severe skin burns and eye damage

Hazard statements - Prevention
Not Applicable

Other hazards
Reacts with water to evolve heat

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see .? on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
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<tbody>
<tr>
<td>Trimesoyl Chloride</td>
<td>4422-95-1</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures
General Advice:
Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:
Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
**Eye Contact:**
Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Inhalation:**
Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. 
**WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Ingestion:**
Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**
Causes skin and eye burns.

**Indication of any immediate medical attention and special treatment needed**
Treat symptomatically

**Notes to Physician:**
Treat symptomatically

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

---

### 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media:**
Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Water spray.

**Unsuitable Extinguishing Media:**
No information available.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:**
Carbon oxides, Halogenated compounds

**Specific hazards:**
May be combustible at high temperatures
When heated to decomposition it emits toxic fumes

**Special Protective Actions for Firefighters**

**Specific Methods:**
No information available.

**Special Protective Equipment for Firefighters:**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent further leakage or spillage. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

<table>
<thead>
<tr>
<th>Components</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
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<tbody>
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Canada

<table>
<thead>
<tr>
<th>Components</th>
<th>Alberta</th>
<th>British Columbia</th>
<th>Ontario</th>
<th>Quebec</th>
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Australia and Mexico

<table>
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<th>Mexico</th>
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</thead>
<tbody>
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<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Product code: T1238  
Product name: TRIMESOYL CHLORIDE
Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses. Safety glasses with side-shields.

Skin and body protection: Chemical resistant apron. Gloves. Long sleeved clothing.

Respiratory protection: Effective dust mask. Wear respirator with dust filter.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Physical state:</td>
<td>Solid.</td>
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<tr>
<td>Appearance:</td>
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<tr>
<td>Color:</td>
<td>Light yellow.</td>
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<tr>
<td>Odor:</td>
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</tr>
<tr>
<td>Formula:</td>
<td>C9H3Cl3O3</td>
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<tr>
<td>Flash point (°C):</td>
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</tr>
<tr>
<td>Flashpoint (°C/°F):</td>
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<tr>
<td>Flash Point Tested according to:</td>
<td>Closed cup</td>
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<td>Lower Explosion Limit (%):</td>
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<tr>
<td>Upper Explosion Limit (%):</td>
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</tr>
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<tr>
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<tr>
<td>Molecular/Formula weight:</td>
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<tr>
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<tr>
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<td>Evaporation rate:</td>
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<tr>
<td>Vapor density:</td>
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<tr>
<td>Partition coefficient (n-octanol/water):</td>
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<tr>
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<tr>
<td>Solubility:</td>
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<td>Color:</td>
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<tr>
<td>Odor:</td>
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<td>Formula:</td>
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<td>Flash point (°C):</td>
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<td>Flash Point Tested according to:</td>
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<tr>
<td>Lower Explosion Limit (%):</td>
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<td>Vapor pressure @ 20°C (kPa):</td>
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<tr>
<td>Density (g/cm3):</td>
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<td>VOC content (g/L):</td>
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<td>Odor threshold (ppm):</td>
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<tr>
<td>Partition coefficient (n-octanol/water):</td>
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</tr>
<tr>
<td>Miscibility:</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Decomposes in water</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity

Product code: T1238

Product name: TRIMESOYL CHLORIDE
10. STABILITY AND REACTIVITY

Reactive with alkalis
Reactive with oxidizing agents

Chemical stability
Stability: Stable under recommended storage conditions
Possibility of Hazardous Reactions: Hazardous polymerization does not occur
Hazardous decomposition products: Carbon oxides. Halogenated compounds.

Other Information
Corrosivity: No information available
Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Trimesoyl Chloride - 4422-95-1
LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information
LD50/oral/rat = 
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse = 
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit 
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat 
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
**Symptoms**

**Skin Contact:** Causes severe skin irritation and burns with itching, erythema, burning pain.

**Eye Contact:** Causes eye burns.

**Inhalation:** May cause irritation of respiratory tract.

**Ingestion:** May cause digestive (gastrointestinal) tract irritation.

**Aspiration hazard** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** No information available

**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH - Carcinogens</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
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</thead>
<tbody>
<tr>
<td>Trimesoyl Chloride</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Target Organs:** No information available

---

## 12. ECOCOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Product code:** T1238  
**Product name:** TRIMESOYL CHLORIDE
13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trimesoyl Chloride</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

- UN-No: UN3261
- Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s. (Trimesoyl Chloride)
- Hazard Class: 8
- Subsidiary Risk: 
- Packing Group: III
- ERG No: 154
- Marine Pollutant: No data available
- DOT RQ (lbs): No information available
- Symbol(s): G

TDG (Canada)

- UN-No: UN3261
- Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
- Hazard Class: 8
- Subsidiary Risk: No information available
- Packing Group: III
- Description: No information available

ADR

- UN-No: UN3261
- Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
- Hazard Class: 8
- Packing Group: III
- Subsidiary Risk: No information available
- Classification Code: No information available
- Description: No information available
- CEFIC Tremcard No: No information available

IMO / IMDG

- UN-No: UN3261
- Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
- Hazard Class: 8

Product code: T1238  Product name: TRIMESOYL CHLORIDE
14. TRANSPORT INFORMATION

Subsidiary Risk: No information available
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID
UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO
UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA
UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 8L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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<tbody>
<tr>
<td>Trimesoyl Chloride</td>
<td>Present</td>
<td>Not present</td>
<td>Not present</td>
<td>Present (3)-4605</td>
<td>Present</td>
<td>Not present</td>
<td>Present 224-594-8</td>
</tr>
</tbody>
</table>

U.S. Regulations


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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Product code: T1238
Product name: TRIMESOYL CHLORIDE
CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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<tbody>
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U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
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<tbody>
<tr>
<td>Trimesoyl Chloride</td>
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<td>Not Applicable</td>
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Canada

WHMIS hazard class:
E Corrosive material

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
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<tbody>
<tr>
<td>Trimesoyl Chloride</td>
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<td>Present</td>
</tr>
</tbody>
</table>

EU Classification

R-phrase(s)
R34 - Causes burns.

S -phrase(s)
S24 - Avoid contact with skin.
S25 - Avoid contact with eyes.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 - After contact with skin, wash immediately with plenty of water
S36 - Wear suitable protective clothing.
S37 - Wear suitable gloves.
S39 - Wear eye/face protection.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

<table>
<thead>
<tr>
<th>Components</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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<td>Trimesoyl Chloride</td>
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</table>

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Product code: T1238
Product name: TRIMESOYL CHLORIDE
Indication of danger:
C - Corrosive.

16. OTHER INFORMATION

Revision Date: 03/23/2015
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet