1. IDENTIFICATION

Product Description: CRESYL ACETATE, PARA

CAS # 140-39-6

FEMA Number 3073

Other means of identification

Vigon Item # 500765

Recommended use:
Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.

Recommended restrictions: For Manufacturing Use Only

Company

Vigon International, Inc.
127 Airport Road
E. Stroudsburg, PA 18301

For information call: 570-476-6300

Web Site: www.vigon.com

2. HAZARD(S) IDENTIFICATION

Physical hazards
Flammable liquids Category 4

Health hazards
Acute toxicity, oral Category 4
Acute toxicity, dermal Category 5
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards:
Not classified.

Label elements

Signal word Warning

Hazard statement
H227 Combustible liquid.
H302 Harmful if swallowed.
H313 May be harmful in contact with skin.
H315 Causes skin irritation.
H315 + H320 Causes skin and eye irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement
Prevention
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261 Avoid breathing mist or vapor.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/eye protection/face protection.

Response
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep 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.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see this label).
P330 Rinse mouth.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use appropriate media to extinguish.

Storage
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRESYL ACETATE</td>
<td>(4- methylphenyl) acetate acetic acid 4-methyl phenyl ester acetic acid p-tolyl ester p-acetoxyltoluene p-cresylic acetate para-tolyl ethanoate acetyl para-cresol</td>
<td>140-39-6</td>
<td>100</td>
</tr>
</tbody>
</table>
4. FIRST-AID MEASURES

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Skin contact
Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.

Eye contact
Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.

Ingestion
Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn’t enter the lungs.

Most important symptoms/effects, acute and delayed
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed
Not available.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Water spray, fog, CO2, dry chemical, or alcohol resistant foam.

Unsuitable extinguishing media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.

Fire fighting equipment/instructions
In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.

Specific methods
Use water spray to cool unopened containers.

General fire hazards
Static charges generated by emptying package in or near flammable vapor may cause flash fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor.

Methods and materials for containment and cleaning up
Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean surface thoroughly to remove residual contamination. Collect and dispose of spillage as indicated in section 13 of the SDS.

Never return spills in original containers for re-use.
Environmental precautions: Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Retain and dispose of contaminated wash water.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid prolonged exposure. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities: Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits: No exposure limits noted for ingredient(s).

Biological limit values: No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls: Use explosion-proof ventilation equipment to stay below exposure limits.

Individual protection measures, such as personal protective equipment:

- **Eye/face protection**: Wear safety glasses with side shields (or goggles).
- **Skin protection**:
  - **Hand protection**: Chemical resistant gloves.
  - **Other**: Not available.
- **Respiratory protection**: Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.
- **Thermal hazards**: Wear appropriate thermal protective clothing, when necessary.
- **General hygiene considerations**: When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**: Refer to Spec Sheet

- **Physical state**: Liquid.
- **Form**: Liquid.
- **Color**: Refer to Spec Sheet

**Odor**: Characteristic.

**Odor threshold**: Not available.

**pH**: Not available.

**Melting point/freezing point**: Not available.

**Initial boiling point and boiling range**: 410 - 411.8 °F (210 - 211 °C)

**Flash point**: 197.0 °F (91.7 °C) Closed Cup

**Evaporation rate**: Not available.

**Flammability (solid, gas)**: Not available.
**SAFETY DATA SHEET**

**500765 CRESYL ACETATE, PARA**

<table>
<thead>
<tr>
<th>Revision Date: 08-01-2014</th>
<th>Page 5 of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version # 01</td>
<td>Print Date: 11-29-2015</td>
</tr>
</tbody>
</table>

**Upper/lower flammability or explosive limits**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Vapor pressure**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 °C</td>
<td>0.03 kPa</td>
</tr>
<tr>
<td></td>
<td>1.47 mm Hg</td>
</tr>
</tbody>
</table>

**Vapor density**

<table>
<thead>
<tr>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2</td>
</tr>
</tbody>
</table>

**Relative density**

<table>
<thead>
<tr>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Solubility(ies)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solubility (water)</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Auto-ignition temperature**

<table>
<thead>
<tr>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Decomposition temperature**

<table>
<thead>
<tr>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Viscosity**

<table>
<thead>
<tr>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Other information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability class</td>
<td>Combustible IIIA estimated</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C9H10O2</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>150.18 g/mol</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.05 at 25 °C</td>
</tr>
</tbody>
</table>

**10. STABILITY AND REACTIVITY**

**Reactivity**

The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability**

Material is stable under normal conditions.

**Possibility of hazardous reactions**

No dangerous reaction known under conditions of normal use.

**Conditions to avoid**

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

No hazardous decomposition products if stored and handled as indicated.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation to the respiratory system.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May be harmful in contact with skin. Causes skin irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Causes serious eye irritation. Causes mild eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

500765 CRESYL ACETATE, PARA

Revision Date: 08-01-2014
Version # 01
Page 6 of 10
Print Date: 11-29-2015

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity
Harmful if swallowed. May be harmful in contact with skin. May cause respiratory irritation. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRESYL ACETATE (CAS 140-39-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>2100 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>1900 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization
Not available.

Skin sensitization
This product is not expected to cause skin sensitization.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Respiratory tract irritation.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
13. DISPOSAL CONSIDERATIONS

Disposal instructions: Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: Not established.

Waste from residues / unused products: Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

ADN
Not regulated as dangerous goods.

ADR
Not regulated as dangerous goods.

RID
Not regulated as dangerous goods.

DOT

BULK

UN number: NA1993
Proper shipping name: COMBUSTIBLE LIQUID, N.O.S. (CRESYL ACETATE, PARA)
Hazard class: Combustible liq
Packing group: III
Environmental hazards:
- Marine pollutant: No
- Packaging exceptions: 150
- Packaging bulk: 242
- Labels required: 3

DOT

NON-BULK
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.
15. REGULATORY INFORMATION

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CERCLA Hazardous Substance List (40 CFR 302.4)**
Not listed.

Not listed.

**SARA 304 Emergency release notification**
Not regulated.

Not listed.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<table>
<thead>
<tr>
<th>Hazard categories</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Hazard - Yes</td>
<td></td>
</tr>
<tr>
<td>Delayed Hazard - No</td>
<td></td>
</tr>
<tr>
<td>Fire Hazard - Yes</td>
<td></td>
</tr>
<tr>
<td>Pressure Hazard - No</td>
<td></td>
</tr>
<tr>
<td>Reactivity Hazard - No</td>
<td></td>
</tr>
</tbody>
</table>

**SARA 302 Extremely hazardous substance**
Not listed.

**SARA 311/312 Hazardous chemical**
Yes

**SARA 313 (TRI reporting)**
Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**
Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**
Not regulated.

**Safe Drinking Water Act (SDWA)**
Not regulated.
US state regulations

US. Massachusetts RTK - Substance List
Not regulated.

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law
Not listed.

US. Rhode Island RTK
Not regulated.

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Not listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date: 11-29-2015
Revision date: 08-01-2014
Version #: 01
HMIS® ratings
Health: 2
Flammability: 2
Physical hazard: 0
The information in the sheet was written based on the best knowledge and experience currently available. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of Vigon’s knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.