SECTION 1 – CHEMICAL IDENTIFICATION

Trade Name: Octadecenylsuccinic Anhydride
Synonym: ODSA H
Formula: Mixture
Chemical Family: Anhydrides
Chemical Use: Chemical intermediate

Date of Issue: December 16, 1991
Revised Date: January 14, 2013

Telephone Number: Information (281) 474-3271
Emergency Number: Chemtrec (800) 424-9300
(703) 527-3887 International

HMIS Hazard Rating
Health: 2
Fire: 1
Reactivity: 1
PPE rating to be supplied by user depending on use conditions.

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a amber colored liquid with a mild odor. Health Hazard: This product may cause irritation to skin and respiratory system. Eye contact may cause severe irritation and possible corneal injury. Ingestion may cause irritation of the mouth, throat and gastrointestinal tract. Flammability Hazards: This product is Non-Flammable. Reactivity Hazards: No known hazards. Environmental Hazards: Environmental effects of this product are not known. Emergency Considerations: Emergency responders must wear the proper personal protective equipment (and have appropriate fire suppression equipment) suitable for the situation to which they are responding.

US DOT SYMBOLS CANADA (WHMIS) SYMBOLS EUROPEAN and (GHS) Hazard Symbols
Non-Regulated Not Controlled

EU LABELING AND CLASSIFICATION:

Classification of the substance or mixture according to Regulation (EC) No1272/2008 These substances are not classified in the Annex I of Directive 67/548/EEC

Hazard Statement(s):
H317: May use an allergic skin reaction

Precautionary Statement(s):
P261: Avoid breathing dust/vapors
P271: Use only in well ventilated area.
P281: Use personal protective equipment as required.
P314: Get medical advice/attention if you feel unwell

**Hazard Classification:**

![Irritant](image)

[Xi] Irritant

**Risk Phrases:**

R43  May cause sensitization by skin contact

**Safety Phrases:**

S24: Avoid contact with skin
S26: In case of contact with eyes
S36/37/39: Wear suitable protective clothing

Eye Contact: May cause severe irritation, redness, pain, blurred vision, and tearing. Corneal injury and burns are also possible.

Skin Contact: May cause irritation. Prolonged contact with skin may cause severe irritation and burns. May cause skin sensitization. May aggravate pre-existing skin disorders.

Inhalation: May cause respiratory tract irritation, sneezing, and coughing. May cause respiratory tract sensitization. May aggravate pre-existing respiratory disorders. Chronic exposure may cause bronchitis and asthma.

Ingestion: May cause irritation of the mouth, throat, and gastrointestinal tract.

**SECTION 3 – COMPOSITION**

<table>
<thead>
<tr>
<th>CAS</th>
<th>EU number</th>
<th>REACH#</th>
<th>Chemical name of the substance</th>
<th>Concentration</th>
<th>Classification according to Regulation (EU) 1272/2008(CLP)</th>
<th>Classification according to EU Directives 67/548/EEC or 1999/45/EC</th>
</tr>
</thead>
<tbody>
<tr>
<td>68784-12-3</td>
<td>272-221-2</td>
<td>01-2119533117-46</td>
<td>2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.</td>
<td>&gt;94 %</td>
<td>Skin Sens. Category 1,H317</td>
<td>Xi ,R43</td>
</tr>
</tbody>
</table>

**SECTION 4 – FIRST AID MEASURES**

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: Immediately remove contaminated clothing and shoes. Wipe excess material from skin and flush with water for at least 15 minutes. Use soap if available or follow by
washing with soap and water. Do not reuse contaminated clothing without laundering. If irritation persists, seek medical advice.

Inhalation: Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, administer artificial respiration. Get medical attention.

Ingestion: Get medical attention immediately.

SECTION 5 – FIREFIGHTING MEASURES

Extinguishing Media: Use water, foam, dry chemical, or carbon dioxide (CO₂).

Special Firefighting Procedures/Precautions:
- Firefighters should wear NIOSH approved self-contained breathing apparatus.
- Responders should wear protective clothing to prevent skin contact. Move containers from fire area. If unable to move, cool sealed containers with water.

Unusual Fire and Explosion Information: This material reacts with water or steam to form octadecenylsuccinic acid and hexadecenylsuccinic acid. This reaction is slightly exothermic. It should not present any problems if large quantities of water are used.

Environmental Note: N/A.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). After cleaning, flush away traces with water. Prevent from entering sewers and waterways. Clean-up personnel should wear protective equipment to prevent contact.

SECTION 7 – HANDLING AND STORAGE

Containers should be grounded and/or bonded when material is transferred. Store in a cool, dry place. Keep away from heat, sparks, and flames.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection: NIOSH approved respiratory protection for organic vapors.

Ventilation: Utilize local exhaust to control vapors. Do not rely on general exhaust.

Protective Gloves: Utilize appropriate impervious chemical gloves.

Eye Protection: Chemical goggles and face shield.

Other Protective Equipment: Wear additional protective clothing to prevent skin contact. This may include aprons, chemical resistant boots, and chemical resistant suits.

Work Practices: Use good personal hygiene practices. Wash hands before eating, drinking,
smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N.E.
Melting Point: N.E.
Volatility/Vol (%): N.E.
Vapor Pressure (mm Hg): N.E.
Vapor Density (Air = 1): ca. 0.96 g/cm³ (20 °C)
Solubility in H₂O: Reacts slowly with water.
Appearance/Odor: Amber colored liquid with a mild odor.
Specific Gravity (H₂O = 1): 0.958 @ 25°C
Evap. Rate (Butyl Acetate = 1): <1
Flash Point: 206 °C (1.013 hPa),
Lower Explosive Limit: N.E.
Upper Explosive Limit: N.E.
Autoignition Temperature: 330 °C (1.013 hPa)
Viscosity, dynamic: < 250 mPa.s (25 °C)

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable.
Conditions to Avoid: High Temperatures, protect from moisture
Incompatible Materials: Alkaline substances. Strong oxidizing agents
Hydrolyses in presence of: Water
Decomposition Products: Thermal decomposition can lead to release of irritating gases and vapors. carbon oxides (COx). Decomposition will occur at temperatures above 220°C.
Hazardous Polymerization: Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity

Acute toxicity for components section begins here

2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:
LD50/Oral/rat/female: > 2.000 mg/kg
LD50/Dermal/rat/male and female: > 2.000 mg/kg

Irritation and corrosion
Irritation and corrosion for components begins here

2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:

Skin: No skin irritation

Eyes:
rabbit
/OECD Test Guideline 405:
No eye irritation

Sensitization

May cause sensitization by skin contact.

2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:
guinea pig/OECD Test Guideline 406 May cause sensitization by skin contact.

Long term toxicity
Long term toxicity for components begins here

2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:

Repeated dose toxicity:
Oral
/rat/male and female:
NOAEL: 100 mg/kg

Mutagenicity

Ames test/OECD Test Guideline 471:
Result: negative
Metabolic activation: with and without

In vitro gene mutation study in mammalian cells/OECD TG 476:
Result: negative
Metabolic activation: with and without

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Reproductive toxicity
SECTION 12 – ECOLOGICAL INFORMATION

12.1 Ecotoxicity effects
   Aquatic toxicity
   Remarks: This material is not classified as dangerous for the environment.
   Aquatic toxicity for components begins here

   2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:
   LC50/96 h

   /Leuciscus idus (Golden orfe)
   /semi-static test/OECD Test Guideline 203: 10 mg/l
   EC50/48 h

   /Daphnia magna (Water flea)
   /semi-static test/OECD Test Guideline 202: 36 mg/l
   EC50/72 h

   /Desmodesmus subspicatus (green algae)
   /static test/OECD Test Guideline 201:
   46.9 mg/l

Toxicity to other organisms

Toxicity to other organisms for components:

   2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:

   no data available

12.2 Persistence and degradability
   Chemical degradation

   Biological degradability for the components

   Biological degradability:
   2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:
   Closed Bottle test/OECD Test Guideline 301 D/28 d: 60 %
Readily biodegradable
Chemical degradation for components

Chemical degradation:
2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:

Hydrolyses in water.

12.3 Bioaccumulative potential
Bioaccumulative potential of the components

2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:

Bioconcentration factor (BCF)
/calculated:
1.450

Not applicable because of rapid hydrolysis. Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water:
not applicable

12.4 Mobility in soil
Mobility
Vapor pressure:
< 0.000001 hPa
( 20 °C)

Water solubility:
not applicable

Distribution in environment
Mobility of the components

2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.:

Vapor pressure:
0.000001 hPa
( 20 °C)

Water solubility:
not applicable

Surface tension:
Based on the chemical structure, Surface activity is not to be expected.
Adsorption and/or desorption: not applicable

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Information refers to the main component.

SECTION 13 – DISPOSAL INFORMATION

Place in a city, state, or federally permitted disposal facility. Handle in accordance with all applicable regulations.

SECTION 14 – TRANSPORTATION INFORMATION

DOT Shipping Name: Not hazardous per DOT guidelines.

Shipping Containers: 18 ga, steel drum (55 gal), UN1A1/X1.2/350/yr/1.1.

SECTION 15 – REGULATORY INFORMATION

U.S. Regulations:

TSCA: All components are listed on the TSCA inventory.
SARA TITLE III
  Acute: Yes
  Chronic: Yes
  Fire: No
  Reactivity: Yes
  Pressure: No

TSCA 12(b) Export Notification: Not Listed
California Proposition 65: Not Listed

European Regulations:

EINECS Number: 272-221-2 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.
Labeling according to EC directives.

Symbol: Xi
   Irritant

R-Phrases: R43 May cause sensitization by skin contact

S-Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
           S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
           S24 Avoid contact with skin

Canadian Regulations:

All components are listed on the DSL or the NDSL.

Japanese Regulations:

Mixed C16-18 Olefins is not listed on the ENCS. All other components are listed.
ENCS Number:
   Hexadecenylsuccinic Anhydride: 2-852X (unlisted chemical name)
   Octadecenylsuccinic Anhydride: 2-852X (unlisted chemical name)
   Mixed C16-18 Olefins: Not Listed

Australian Regulations:

All components are listed on the AICS.

Korean Regulations:

All components are listed on the ECL.
ECL Number:
   Hexadecenylsuccinic Anhydride: KE-18485
   Octadecenylsuccinic Anhydride: KE-10724
   Mixed C16-18 Olefins: KE-00651

SECTION 16 – OTHER INFORMATION

<table>
<thead>
<tr>
<th>PPE Codes (NPCA-HMIS)</th>
</tr>
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<tbody>
<tr>
<td>A – Glasses</td>
</tr>
<tr>
<td>B – Glasses, Gloves</td>
</tr>
<tr>
<td>C – Glasses, Gloves, Apron</td>
</tr>
<tr>
<td>D – Faceshield, Gloves, Apron</td>
</tr>
<tr>
<td>E – Glasses, Gloves, Dustmask</td>
</tr>
<tr>
<td>F – Glasses, Gloves, Apron, Dust Respirator</td>
</tr>
</tbody>
</table>
Disclaimer

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