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

1.1. Product identifier

Substance name : Octenylsuccinic Anhydride, OSA
Product form : Substance
CAS No : 26680-54-6
Product code : OSA
Other means of identification : Succinic anhydride, octenyl-, n-Octenylsuccinic anhydride

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Used as an intermediate in industrial processes

1.3. Details of the supplier of the safety data sheet

Dixie Chemical Company, Inc.
10601 Bay Area Blvd
Pasadena TX 77507
Phone: 281-474-3271
Email: msds@dixiechemical.com

1.4. Emergency telephone number

Emergency number : CHEMTREC® (800) 424-9300 Domestic, (703) 527-3887 International

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Acute Tox. 4 (Oral) H302
Acute Tox. 4 (Dermal) H312
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Skin Sens. 1 H317

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US) : !

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H302+H312 - Harmful if swallowed or in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : P261 - Avoid breathing dust, mist
P264 - Wash hands, forearms and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P301+P312 - If swallowed: Call a doctor, a poison center if you feel unwell
P302+P352 - If on skin: Wash with plenty of soap and water
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 doctor, a poison center if you feel unwell
P321 - Specific treatment (see first aid instructions on this label)
P330 - Rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available
SECTION 3: Composition/information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,5-Furandione, dihydro-3-(octenyl)-</td>
<td>(CAS No) 26680-54-6</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.

First-aid measures after inhalation: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.

First-aid measures after skin contact: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.

First-aid measures after eye contact: IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. If pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.

First-aid measures after ingestion: IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Symptoms/injuries after inhalation: May cause respiratory irritation.

Symptoms/injuries after skin contact: Causes skin irritation. May cause an allergic skin reaction. Harmful in contact with skin.

Symptoms/injuries after eye contact: Causes serious eye irritation.

Symptoms/injuries after ingestion: Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard: If involved in a fire, product will burn.

Explosion hazard: No data available.

Reactivity: No data available.

5.3. Advice for firefighters

Firefighting instructions: Use cold water spray to cool fire-exposed containers to minimize risk of rupture. Do not dispose of fire-fighting water in the environment. Dispose of in accordance with relevant local regulations. Prevent human exposure to fire, fumes, smoke and products of combustion.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other information: Carbon dioxide and carbon monoxide may form by combustion. In contact with hot water may form phthalic acid.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

6.1.1. For non-emergency personnel

Protective equipment: Wear Protective equipment as described in Section 8.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions

Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters. Avoid release to the environment.
6.3. Methods and material for containment and cleaning up

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

See Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wear personal protective equipment. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe mist, vapours, gas. Avoid contact with skin and eyes. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Do not store in heat or direct sunlight. Keep only in the original container. Keep container tightly closed. Keep in a bonded area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,5-Furandione, dihydro-3-(octenyl)- (26680-54-6)

| Remark (ACGIH) | OELs not established |
| Remark (OSHA)  | OELs not established |

8.2. Exposure controls

Appropriate engineering controls: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment: Gloves. Protective goggles. Protective clothing.

Hand protection: Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl.

Eye protection: Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection: Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection: Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Color: Light yellow.

Odor: Mild.

Odor Threshold: No data available

pH: No data available

Relative evaporation rate (butylacetate=1): No data available

Melting point: 8 - 12 °C (46 - 54 °F)

Freezing point: No data available

Boiling point: 179 - 183 °C @ 9 mm Hg (354 - 361 °F)

Flash point: 163 °C (325 °F) PMCC, ASTM D93

Auto-ignition temperature: No data available

Decomposition temperature: > 220 °C (428 °F)

Flammability (solid, gas): No data available

Vapour pressure: < 1 mm Hg @ 20 °C (68 °F) ASTM D5191
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Relative vapour density at 20 °C: > 1 (air = 1)
Relative density: 1.024 @ 25 °C (77 °F) (water = 1)
Solubility: Reacts slowly with water.
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidising properties: No data available
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
High temperatures, incompatible materials.

10.5. Incompatible materials
Alkaline materials. Reacts slowly with water to form octenylsuccinic acid.

10.6. Hazardous decomposition products
Carbon monoxide, carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Oral: Harmful if swallowed. Dermal: Harmful in contact with skin.
Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitisation: May cause an allergic skin reaction.
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified
Symptoms/injuries after inhalation: May cause respiratory irritation.
Symptoms/injuries after skin contact: Causes skin irritation. May cause an allergic skin reaction. Harmful in contact with skin.
Symptoms/injuries after eye contact: Causes serious eye irritation.
Symptoms/injuries after ingestion: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: No data available.

12.2. Persistence and degradability
Octenylsuccinic Anhydride, OSA (26680-54-6)
Persistence and degradability: No data available.

12.3. Bioaccumulative potential
Octenylsuccinic Anhydride, OSA (26680-54-6)
Bioaccumulative potential: No information available.
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12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods: Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with DOT
Not hazardous for transport

Additional information
Other information: No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
Octenylsuccinic Anhydride, OSA (26680-54-6)
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt
SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard

15.2. International regulations
All chemical substances in this product are listed on the Canadian Domestic Substances List (DSL) or are exempt
All chemical substances in this product are listed on the European EINECS Inventory or the ELINCS list or are exempt
All chemical substances in this product are listed on the Japanese Existing and New Chemical Substances Inventory (ENCS) or are exempt
All chemical substances in this product are listed on the Taiwan Chemical Substance Inventory (TSCI) or are exempt
All chemical substances in this product are listed on the Australian Inventory of Chemical Substances (AICS)
All chemical substances in this product are listed on the Korean Existing Chemicals Inventory (KECI)
All chemical substances in this product are listed on the New Zealand Inventory of Chemicals (NZIoC)
All chemical substances in this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)

15.3. US State regulations
This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Indication of changes: Revision 1.0: New SDS Created.
: 09/15/2015
Other information: Author: ANF.

NFPA health hazard: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard: 1 - Must be preheated before ignition can occur.

NFPA reactivity: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.
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HMIS III Rating
Health : 2
Flammability : 1
Physical : 1
Personal Protection :

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.