# Octadecenylsuccinic Anhydride (ODSA)

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

### 1.1. Product identifier

Trade name : Octadecenylsuccinic Anhydride

Product form : Mixture

Product code : ODSA

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

Use of the substance/mixture : Manufacture, Formulation, Hydrophobation of paper and board

### 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**

Skin Sens. 1B H317

### 2.2. Label elements

**GHS-US labelling**

Hazard pictograms (GHS-US) :

GHS07

Signal word (GHS-US) : **Warning**

Hazard statements (GHS-US) : H317 - May cause an allergic skin reaction

Precautionary statements (GHS-US) : P261 - Avoid breathing vapours, dust
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P302+P352 - If on skin: Wash with plenty of soap and water
P321 - Specific treatment (see first aid instructions on this label)
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
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

Not applicable

### 3.2. Mixture

| Name | Product identifier | % |
|---|---|---|
| 2,5-Furandione, 3-(hexadecenyl)dihydro- | (CAS No) 32072-96-1 | 0 - 10 |
| 2,5-Furandione, dihydro-3-(octadecen-1-yl)- | (CAS No) 28777-98-2 | 90 - 100 |
| *Chemical components disclosed above are those requiring disclosure in accordance with the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)* | | |

## 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 after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

Symptoms/injuries after ingestion : May cause gastrointestinal irritation.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Carbon dioxide. Alcohol-resistant foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : No data available.

Reactivity : Hydrolyzes in presence of water.

### 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.

## 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. Prevent entry to sewers and public waters.

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

No additional information available

## 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Protect from sunlight. Keep away from ignition sources. Store away from incompatible materials. Protect from moisture.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| 2,5-Furandione, 3-(hexadecenyl)dihydro- (32072-96-1) | |
|---|---|
| Remark (ACGIH) | OELs not established |
| Remark (OSHA) | OELs not established |

| 2,5-Furandione, dihydro-3-(octadecenyl)- (28777-98-2) | |
|---|---|
| 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 |
| Appearance | : Oily liquid. |
| Color | : Amber - Brownish. |
| Odor | : None - mild |
| Odor Threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : < 1 |
| Melting point | : No data available |
| Freezing point | : -13.5 ºC |
| Boiling point | 212 °C; 414 °F 209 ºC @ 1 mmHg |
| Flash point | : 206 ºC (403 ºF), PMCC, ASTM D 93 |
| Auto-ignition temperature | : 330 °C @1.013 hPa |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : < 1 mm Hg (20 °C) ASTM D5191 |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : 0.95 @ 25 °C (WATER = 1) |
| Solubility | : Reacts slowly with water. |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : ≤ 250 mPa.s 25 °C |

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**

Hydrolyzes in presence of water.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

None known.

**10.4. Conditions to avoid**

Moisture. High temperatures, incompatible materials.

**10.5. Incompatible materials**

Moisture. Strong oxidizing agents.

**10.6. Hazardous decomposition products**

Carbon oxides (CO, $CO_2$). Irritating vapors.

## SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

Acute toxicity : Not classified

| **Octadecenylsuccinic anhydride (ODSA)** | |
|---|---|
| LD50 oral rat | > 2000 mg/kg (OECD 423) |
| LD50 dermal rat | > 2000 mg/kg (Semiocclusive; OECD 402) |

| **2,5-Furandione, 3-(hexadecenyl)dihydro- (32072-96-1)** | |
|---|---|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rat | > 5000 mg/kg |

Skin corrosion/irritation : Not classified

(Product was negative for skin irritation in an in vitro study (OECD 431))

Serious eye damage/irritation : Not classified.

(Product was negative for eye irritation in an in vitro study (OECD 405). Product was not irritating to rabbit eyes (OECD 405))

Respiratory or skin sensitisation : May cause an allergic skin reaction.

(Product was sensitizing in a Guinea Pig Maximization Test (GPMT) (OECD 406))

Germ cell mutagenicity : Not classified

(Product was negative for mutagenicity in an Ames test with and without metabolic activation. (OECD 471). Product was negative for mutagenicity in a mammalian cell gene mutation assay in Chinese hamster lung fibroblasts, with and without metabolic activation. (OECD 476). Product was negative for mutagenicity in an in vitro mammalian chromosome aberration test. (OECD 473))

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

(No adverse effects noted on fertility or development in rats. NOAEL (fertility) = 1000 mg/kg/d; NOEL (developmental) = 1000 mg/kg/d. (OECD 422))

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

| **Octadecenylsuccinic anhydride (ODSA)** | |
|---|---|
| NOAEL (oral, rat, 90 days) | ≈ 300 mg/kg bodyweight/day (OECD 408) |

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

Symptoms/injuries after ingestion : May cause gastrointestinal irritation.

## SECTION 12: Ecological information

**12.1. Toxicity**

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

| Octadecenylsuccinic anhydride (ODSA) | |
|---|---|
| LC50 fishes 1 | > 10 mg/l Leuciscus idus; 96 hr; analogue data (OECD 403) |
| EC50 Daphnia 1 | > 36 mg/l Daphnia magna; 48 hr (OECD 202) |
| EC50 other aquatic organisms 1 | ≈ 47 mg/l Freshwater algae; (OECD 201) |

**12.2. Persistence and degradability**

| Octadecenylsuccinic anhydride (ODSA) | |
|---|---|
| Persistence and degradability | Product is expected to be readily biodegradable based on analogue data. |

**12.3. Bioaccumulative potential**

| Octadecenylsuccinic anhydride (ODSA) | |
|---|---|
| Bioaccumulative potential | No information available. |

**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**

| Octadecenylsuccinic anhydride (ODSA) | |
|---|---|
| All of the chemical substances in this product are listed on 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 Japanese Existing and New Chemical Substances Inventory (ENCS) or are exempt
All chemical substances in this product are listed on the Chinese Chemical Inventory of Existing Chemical Substances (IECSC) or are exempt
All chemical substances in this product are listed on the Canadian Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or are exempt
All chemical substances in this product are listed on the Australian Inventory of Chemical Substances (AICS) or are exempt
All chemical substances in this product are listed on the Korean Existing Chemicals Inventory (KECI) or are exempt
All chemical substances in this product are listed on the New Zealand Inventory of Chemicals (NZIoC) 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 European EINECS inventory or ELINCS list or are exempt
One or more of the chemical substances in this product is not listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)

**15.3. US State regulations**

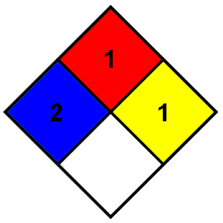
**California Proposition 65**

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 |
| | : | 07/15/2015 |
| 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. |




**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