

MATERIAL SAFETY DATA SHEET

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FOR DOMESTIC SHIPMENTS ONLY

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SECTION 1 – CHEMICAL IDENTIFICATION

Trade Name: Dodecenylsuccinic Anhydride (DDSA) Date of Issue: October 29, 1986
Formula: C₁₆H₂₆O₃ Revised Date: January 9, 2007
Synonyms: 2,5-Furandione, 3-(dodecenyl) dihydro-
Dodecenylsuccinic Acid Anhydride
Known Uses: Curing agent in epoxy resins systems and as an intermediate for the preparation of
imides in lubricating oils.
Chemical Family: Organic Anhydrides

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

HMIS Hazard Rating 4 = Extreme
Health: 2 3 = High
Fire: 1 2 = Moderate
Reactivity: 1 1 = Slight
PPE rating to be supplied by user 0 = Least
depending on use conditions.

SECTION 2 – COMPOSITION

<u>Components</u>	<u>Percentage</u>	<u>TLV (ppm)</u>	<u>CAS #</u>
2,5-Furandione, 3-(dodecenyl) dihydro-	>97	Not Established.	25377-73-5

SECTION 3 – HAZARDS IDENTIFICATION

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.

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.

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

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

SECTION 4 – FIRST AID MEASURES

- Inhalation: Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, administer artificial respiration. 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.
- Eye Contact: Immediately flush with plenty of water for at least 15 minutes. 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 dodecenylsuccinic acid. This reaction is slightly exothermic. It should not present any problems if large quantities of water are used.
- Environmental Note: Avoid runoff to waterways and sewers. May be toxic to aquatic organisms.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Protective Measures: Evacuate area of unprotected personnel. Eliminate sources of ignition. Wear personal protective equipment (See section 8) when responding to spills.

Spill Management: Stop source of leak if safe to do so. Dike and contain spill. Use vacuum truck or pump to storage/salvage vessels. Clean up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Spray area with water to remove trace residue. Contain runoff from residue flush and dispose of properly. Prevent entry into waterways, sewer, or confined areas. Remove contaminated trace residues from soil and dispose of in same manner as material. For small spills, clean up residue with an absorbent such as clay, sand or other compatible material. Place in an appropriate container and dispose of material properly.

Disposal: Proper disposal should be evaluated based on regulatory status of this material (refer to section 13).

SECTION 7 – HANDLING AND STORAGE

Containers do not have to be grounded and bonded when material is transferred, but it is recommended as a good practice. 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 high vapor concentrations in confined areas.
- Eye Protection: Chemical goggles and possibly a face shield. Have eyewash facilities readily available.
- Other Protective Equipment: Wear additional protective clothing to prevent skin contact. This may include 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.

Hand protection:

Data is based on Hexadecenylsuccinic Anhydride, CAS 32072-96-1, using test method ASTM F739-99a:

Glove Material:	PVC	Nitrile Rubber	Neoprene Rubber	Butyl Rubber
Layer Thickness:	1.1 mm	0.48 mm	0.96 mm	0.66 mm
Breakthrough time:	>480 Min.	>480 Min.	>480 Min.	>480 Min.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- Boiling Point: 343-374°F (173-190°C) at 3 mm Hg
- Melting Point: Not Established
- Molecular Weight: 266.38
- Volatility/Vol (%): Not Established.
- Vapor Pressure (mm Hg): <1 at 68°F (20°C)
- Vapor Density (Air = 1): >1
- Solubility in H₂O: Reacts slowly with water.
- Appearance/Odor: Light yellow liquid / Slight odor.
- Odor Threshold: Not Established
- pH: Not Established
- Specific Gravity (H₂O = 1): 1.002 at 79°F (26°C)
- Evap. Rate (Butyl Acetate = 1): <1
- Flash Point: 315°F (157°C) PMCC, ASTM D93
- Viscosity (cps) Not Established
- Lower Explosive Limit: Not Established
- Upper Explosive Limit: Not Established
- Autoignition Temperature: Not Established

SECTION 10 – STABILITY AND REACTIVITY

- Chemical Stability: Stable.
- Conditions to Avoid: Incompatible materials.
- Incompatible Materials: Alkaline substances. Water will affect product quality.

Decomposition Products: Forms carbon dioxide at temperatures above 428°F (220°C).

Hazardous Polymerization: Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogenicity listed by: **NTP: No** **IARC: No** **OSHA: No**

ACGIH **TLV:** Not Established **STEL:** Not Established

OSHA **PEL:** Not Established **STEL:** Not Established

Inhalation: LCLo: 1220 mg/m³/4H (rat)

Intraperitoneal: LD50: 320 mg/kg (mouse)

The following toxicological information is for the compound Dodecenylsuccinic anhydride, CAS Number 26544-38-7.

Inhalation: LCLo: 1220 mg/m³/4H (rat)

Skin: LD50: 6200 mg/kg (rabbit)

4.4/8.0 - as is (rabbit) Draize Test

2.2/8.0 - 50% in mineral oil (rabbit) Draize Test

Eyes: 27/110 at 72H – not washed (rabbit) Draize Test

10/110 at 72H – wash after 4 sec (rabbit) Draize Test

10/110 at 72H – wash after 30 sec (rabbit) Draize Test

Ingestion: LD50: 2550 mg/kg (rat)

Intraperitoneal: LD50: 320 mg/kg (mouse)

SECTION 12 – ECOLOGICAL INFORMATION

No data available.

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

Not considered hazardous for shipping.

SECTION 15 – REGULATORY INFORMATION

TSCA: All substances are listed on, or are exempt from reporting.

SARA Hazard Notification:

Hazard Categories Under Title III:	Acute.
Section 302 Extremely Hazardous Substances:	Not Listed
Section 313 Toxic Chemicals:	Not Listed
CERCLA RQ:	Not Listed

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

SECTION 16 – OTHER INFORMATION

PPE Codes (NPCA-HMIS)

A – Glasses	G – Glasses, Gloves, Vapor Respirator
B – Glasses, Gloves	H – Goggles, Gloves, Apron, Vapor Respirator
C – Glasses, Gloves, Apron	I – Glasses, Gloves, Dust/Vapor Respirator
D – Faceshield, Gloves, Apron	J – Goggles, Gloves, Apron, Dust/Vapor Respirator
E – Glasses, Gloves, Dustmask	K – Supplied Air, Gloves, Full Protective Suit, Boots
F – Glasses, Gloves, Apron, Dust Respirator	

Disclaimer

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