

## SAFETY DATA SHEET

Version 5.6  
Revision Date 02/27/2015  
Print Date 04/30/2016

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**1. PRODUCT AND COMPANY IDENTIFICATION****1.1 Product identifiers**

Product name : Butylated hydroxytoluene

Product Number : W218405  
Brand : Aldrich

CAS-No. : 128-37-0

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

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

**1.4 Emergency telephone number**

Emergency Phone # : (314) 776-6555

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**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word : Warning

Hazard statement(s)  
H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273

Avoid release to the environment.

P391

Collect spillage.

P501

Dispose of contents/ container to an approved waste disposal plant.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Synonyms : 2,6-Di-tert-butyl-4-methylphenol  
BHT  
DBPC

2,6-Di-tert-butyl-p-cresol  
Butylhydroxytoluene  
Butylated hydroxytoluene

Formula : C<sub>15</sub>H<sub>24</sub>O  
Molecular weight : 220.35 g/mol  
CAS-No. : 128-37-0  
EC-No. : 204-881-4

#### Hazardous components

Component	Classification	Concentration
<b>2,6-di-tert-Butyl-p-cresol</b>		
	Aquatic Acute 1; Aquatic Chronic 1; H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.  
For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
2,6-di-tert-Butyl-p-cresol	128-37-0	TWA	2.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Not classifiable as a human carcinogen		
		TWA	10.000000 mg/m3	USA. NIOSH Recommended Exposure Limits

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### **Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

a) Appearance	Form: crystalline Colour: white
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: 69 - 73 °C (156 - 163 °F) - lit.
f) Initial boiling point and boiling range	265 °C (509 °F) - lit.
g) Flash point	127.0 °C (260.6 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	0.01 hPa (0.01 mmHg) at 20.0 °C (68.0 °F)
l) Vapour density	No data available
m) Relative density	1.05 g/cm <sup>3</sup> at 20 °C (68 °F)
n) Water solubility	0.0004 g/l at 20 °C (68 °F) - slightly soluble
o) Partition coefficient: n-octanol/water	log Pow: 5.1
p) Auto-ignition temperature	470.0 °C (878.0 °F)
q) Decomposition temperature	No data available
r) Viscosity	3.47 mm <sup>2</sup> /s at 80 °C (176 °F) -
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### **9.2 Other safety information**

Solubility in other Toluene - soluble

solvents	Methanol - soluble Acetone - soluble
Dissociation constant	12.2

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Acid chlorides, Acid anhydrides, Oxidizing agents, Bases, Brass, Copper

### 10.6 Hazardous decomposition products

Other decomposition products - No data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - > 6,000 mg/kg  
(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 402)

No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

Eyes - Rabbit  
Result: No eye irritation  
(Read-across (Analogy))

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Ames test  
S. typhimurium  
Result: negative

Mouse - male and female  
Result: negative

#### Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2,6-di-tert-Butyl-p-cresol)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 25 mg/kg  
RTECS: GO7875000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Toxicity to fish LC50 - *Oryzias latipes* - 5.3 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - 0.48 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to bacteria Growth inhibition EC50 - Protozoa - 1.7 mg/l - 24 h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

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**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

Not dangerous goods

**IMDG**

UN number: 3077      Class: 9      Packing group: III      EMS-No: F-A, S-F  
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,6-di-tert-Butyl-p-cresol)  
 Marine pollutant:yes

**IATA**

UN number: 3077      Class: 9      Packing group: III  
 Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (2,6-di-tert-Butyl-p-cresol)

**Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

**15. REGULATORY INFORMATION****SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

No SARA Hazards

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
2,6-di-tert-Butyl-p-cresol	128-37-0	1993-04-24

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
2,6-di-tert-Butyl-p-cresol	128-37-0	1993-04-24

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
2,6-di-tert-Butyl-p-cresol	128-37-0	1993-04-24

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**HMIS Rating**

Health hazard:	0
Chronic Health Hazard:	
Flammability:	1
Physical Hazard	0

**NFPA Rating**

Health hazard:	2
Fire Hazard:	1
Reactivity Hazard:	0

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

Version: 5.6

Revision Date: 02/27/2015

Print Date: 04/30/2016



## Safety Data Sheet

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

### Section 1: Identification

**Product Name:** (Z,E)-5,7-Dodecadienyl acetate  
**Product Code:** (Z,E)-5,7-12Ac

**Manufacturer:** ISCA TECHNOLOGIES, Inc.  
1230 Spring Street  
Riverside, CA 92507  
www.iscatech.com

**Recommended Use:** Insect Pheromone

**Emergency Phone Number:** 951 686 5008

### Section 2: Hazard Identification

**GHS-US classification and Hazard Statement:**

H227 - Combustible Liquid  
H316 - Causes mild skin irritation  
H320 - Causes eye irritation  
H335 - May cause respiratory irritation

**Hazard Pictograms:**



**Precautionary Statements:**

P210 - Keep away from heat, open flames, sparks.  
P233 - Keep container tightly closed.  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing mist, spray, vapors  
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.  
P280 - Wear eye protection, protective clothing, protective gloves  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
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 or doctor if you feel unwell  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P370+P378 - In case of fire: Use appropriate media for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P235 - Keep cool  
P501 - Dispose of contents/container according to local, regional, national, and international regulations

**HMIS Rating**  
Health: 0  
Flammability: 2  
Reactivity: 0

**Other Hazards**

**NFPA Rating**  
Health: 0  
Flammability: 2  
Reactivity: 0

### SECTION 3: Composition/information on ingredients

Name	Product Identifier	Molecular Mass	Molecular Formula	Chemical Name	GHS-US Classification
(Z,E)-5,7-Dodecadienyl acetate	CAS #: 78350-11-5	224.34	C <sub>14</sub> H <sub>24</sub> O <sub>2</sub>	(Z,E)-5,7-Dodecadienyl acetate	H227, H316, H320, H335

### SECTION 4: First aid measures

**Description of first aid measures**

**Inhalation:** Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

**Skin:** In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.

**Eye:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion:** Do NOT induce vomiting. If person is drowsy or unconscious and vomiting, place on the left side with head down. Seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Refer to Section 11 - Toxicological Information.

**Notes to Physician:** All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### SECTION 5: Firefighting measures

**Suitable Extinguishing Media:** For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Cool all affected containers with flooding quantities of water.

**Unsuitable Extinguishing Media:** Avoid the use of heavy water stream, as this may spread the fire.

**Advice for firefighters:** Exercise caution when fighting any chemical fire. Wear full protective gear. Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures:

**Personal Precautions:** Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Emergency Procedures:** As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) Keep out of low areas. Keep unauthorized personnel away. Stay upwind. Ventilate closed spaces before entering.

**Environmental precautions:** Avoid run off to waterways and sewers.

**Methods and material for containment and cleaning up:** Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

### Section 7 - Handling and Storage

**Storage:** Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Keep container closed when not in use. Keep away from incompatible materials.

**Incompatible materials:** Keep away from heat, ignition sources oxidizers and strong acids.

### SECTION 8: Exposure controls/personal protection

#### Exposure Controls:

**Engineering Controls:** Safety shower and eye wash. Mechanical exhaust required.

**Personal Protective Equipment:** Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

**General Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### Section 9 - Physical and Chemical Properties

Physical state:	Liquid	Specific Density:	Data not available
Odor:	Waxy, fatty	Partition coefficient n-octanol/water:	Data not available
pH:	Not applicable	Solubility:	Not soluble in water. Soluble in most organic solvents
Melting point:	Data Not Available	Evaporation Rate:	Data Not Available
Boiling point:	Data not available	Vapor Pressure:	Data Not Available
Flash Point:	Data Not Available		

### Section 10: Stability and Reactivity

**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Stable under normal temperatures and pressures.

**Possibility of hazardous reactions:** Hazardous polymerization will not occur.

**Conditions to avoid:** High temperatures, sparks, open flames and live electrical circuits.

**Incompatible materials:** Oxidizing agents, strong acids.

**Hazardous decomposition products:** In case of fire oxides of carbon, fumes or vapors, soot and smoke may be produced.

### Section 11 - Toxicological Information

Toxicological properties of this product have not been investigated

### Section 12 - Ecological Information

Ecological properties of this product have not been investigated

### Section 13 - Disposal Considerations

**Appropriate Method of disposal:** Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations .

### Section 14 - Transport Information

**DOT:** Not dangerous goods

**IATA:** Not dangerous goods

### Section 15 - Regulatory Information

**United States Regulatory information:** SARA Listed: No

**Canada Regulatory information:** WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR. DSL: No NDSL: No.

### Section 16 - Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Isca Technologies, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. Furthermore, Isca Technologies, Inc. assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer as described in Section 1.

## Safety Data Sheet

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

### Section 1: Identification

**Product Name:** (Z,E)-5,7-Dodecadienol  
**Product Code:** (Z,E)-5,7-12OH

**Manufacturer:** ISCA TECHNOLOGIES, Inc.  
1230 Spring Street  
Riverside, CA 92507  
www.iscatech.com

**Recommended Use:** Insect Pheromone

**Emergency Phone Number:** 951 686 5008

### Section 2: Hazard Identification

**GHS-US classification and Hazard Statement:**

H227- Combustible Liquid  
H316 - Causes mild skin irritation  
H320 - Causes eye irritation  
H335 - May cause respiratory irritation

**Hazard Pictograms:**



**Precautionary Statements:**

P210 - Keep away from heat, open flames, sparks.  
P233 - Keep container tightly closed.  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing mist, spray, vapors  
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.  
P280 - Wear eye protection, protective clothing, protective gloves  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
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 or doctor if you feel unwell  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P370+P378 - In case of fire: Use appropriate media for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P235 - Keep cool  
P501 - Dispose of contents/container according to local, regional, national, and international regulations

**HMIS Rating**  
Health: 0  
Flammability: 2  
Reactivity: 0

**Other Hazards**

**NFPA Rating**  
Health: 0  
Flammability: 2  
Reactivity: 0

### SECTION 3: Composition/information on ingredients

Name	Product Identifier	Molecular Mass	Molecular Formula	Chemical Name	GHS-US Classification
(Z,E)-5,7-Dodecadienol	CAS #: 73416-71-4	182.31	C <sub>12</sub> H <sub>22</sub> O	(Z,E)-5,7-Dodecadienol	H227, H316, H320, H335

### SECTION 4: First aid measures

**Description of first aid measures**

**Inhalation:** Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

**Skin:** In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.

**Eye:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion:** Do NOT induce vomiting. If person is drowsy or unconscious and vomiting, place on the left side with head down. Seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Refer to Section 11 - Toxicological Information.

**Notes to Physician:** All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### SECTION 5: Firefighting measures

**Suitable Extinguishing Media:** For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Cool all affected containers with flooding quantities of water.

**Unsuitable Extinguishing Media:** Avoid the use of heavy water stream, as this may spread the fire.

**Advice for firefighters:** Exercise caution when fighting any chemical fire. Wear full protective gear. Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**

**Personal Precautions:** Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Emergency Procedures:** As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) Keep out of low areas. Keep unauthorized personnel away. Stay upwind. Ventilate closed spaces before entering.

**Environmental precautions:** Avoid run off to waterways and sewers.

**Methods and material for containment and cleaning up:** Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

### Section 7 - Handling and Storage

**Storage:** Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Keep container closed when not in use. Keep away from incompatible materials.

**Incompatible materials:** Keep away from heat, ignition sources oxidizers and strong acids.

### SECTION 8: Exposure controls/personal protection

**Exposure Controls:**

**Engineering Controls:** Safety shower and eye wash. Mechanical exhaust required.

**Personal Protective Equipment:** Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

**General Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### Section 9 - Physical and Chemical Properties

Physical state:	Liquid	Specific Density:	0.844±0.06 g/cm <sup>3</sup> Temp: 20 °C
Odor:	Waxy, fatty	Partition coefficient n-octanol/water:	Log P: 8.540±0.253 Temp: 25°C
pH:	Not applicable	Solubility:	Not soluble in water. Soluble in most organic solvents
Melting point:	Data Not Available	Evaporation Rate:	Data Not Available
Boiling point:	340.6±10.0 °C @ Press: 760 Torr	Vapor Pressure:	1.68E-4 Torr. Temp: 25 °C
Flash Point:	Flash Point: 139.7±15.9 °C		

### Section 10: Stability and Reactivity

**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Stable under normal temperatures and pressures.

**Possibility of hazardous reactions:** Hazardous polymerization will not occur.

**Conditions to avoid:** High temperatures, sparks, open flames and live electrical circuits.

**Incompatible materials:** Oxidizing agents, strong acids.

**Hazardous decomposition products:** In case of fire oxides of carbon, fumes or vapors, soot and smoke may be produced.

### Section 11 - Toxicological Information

Toxicological properties of this product have not been investigated

### Section 12 - Ecological Information

Ecological properties of this product have not been investigated

### Section 13 - Disposal Considerations

**Appropriate Method of disposal:** Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations .

### Section 14 - Transport Information

**DOT:** Not dangerous goods

**IATA:** Not dangerous goods

### Section 15 - Regulatory Information

**United States Regulatory information:** SARA Listed: No

**Canada Regulatory information:** WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR. DSL: No NDSL: No.

### Section 16 - Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Isca Technologies, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. Furthermore, Isca Technologies, Inc. assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer as described in Section 1.

## Safety Data Sheet

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

### Section 1: Identification

**Product Name:** (Z,E)-5,7-Dodecadienyl propionate  
**Product Code:** (Z,E)-5,7-12Prop

**Manufacturer:** ISCA TECHNOLOGIES, Inc.  
1230 Spring Street  
Riverside, CA 92507  
www.iscatech.com

**Recommended Use:** Insect Pheromone

**Emergency Phone Number:** 951 686 5008

### Section 2: Hazard Identification

**GHS-US classification and Hazard Statement:**

H227 - Combustible Liquid  
H316 - Causes mild skin irritation  
H320 - Causes eye irritation  
H335 - May cause respiratory irritation

**Hazard Pictograms:**



**Precautionary Statements:**

P210 - Keep away from heat, open flames, sparks.  
P233 - Keep container tightly closed.  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing mist, spray, vapors  
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.  
P280 - Wear eye protection, protective clothing, protective gloves  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
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 or doctor if you feel unwell  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P370+P378 - In case of fire: Use appropriate media for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P235 - Keep cool  
P501 - Dispose of contents/container according to local, regional, national, and international regulations

**HMIS Rating**  
Health: 0  
Flammability: 2  
Reactivity: 0

**Other Hazards**

**NFPA Rating**  
Health: 0  
Flammability: 2  
Reactivity: 0

### SECTION 3: Composition/information on ingredients

Name	Product Identifier	Molecular Mass	Molecular Formula	Chemical Name	GHS-US Classification
(Z,E)-5,7-Dodecadienyl propionate	CAS #: 83959-30-2	238.37	C <sub>15</sub> H <sub>26</sub> O <sub>2</sub>	(Z,E)-5,7-Dodecadienyl propionate	H227, H316, H320, H335

### SECTION 4: First aid measures

**Description of first aid measures**

**Inhalation:** Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

**Skin:** In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.

**Eye:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion:** Do NOT induce vomiting. If person is drowsy or unconscious and vomiting, place on the left side with head down. Seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Refer to Section 11 - Toxicological Information.

**Notes to Physician:** All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### SECTION 5: Firefighting measures

**Suitable Extinguishing Media:** For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Cool all affected containers with flooding quantities of water.

**Unsuitable Extinguishing Media:** Avoid the use of heavy water stream, as this may spread the fire.

**Advice for firefighters:** Exercise caution when fighting any chemical fire. Wear full protective gear. Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**

**Personal Precautions:** Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Emergency Procedures:** As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) Keep out of low areas. Keep unauthorized personnel away. Stay upwind. Ventilate closed spaces before entering.

**Environmental precautions:** Avoid run off to waterways and sewers.

**Methods and material for containment and cleaning up:** Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

### Section 7 - Handling and Storage

**Storage:** Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Keep container closed when not in use. Keep away from incompatible materials.

**Incompatible materials:** Keep away from heat, ignition sources oxidizers and strong acids.

### SECTION 8: Exposure controls/personal protection

**Exposure Controls:**

**Engineering Controls:** Safety shower and eye wash. Mechanical exhaust required.

**Personal Protective Equipment:** Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

**General Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### Section 9 - Physical and Chemical Properties

Physical state:	Liquid	Specific Density:	Data not available
Odor:	Waxy, fatty	Partition coefficient n-octanol/water:	Data not available
pH:	Not applicable	Solubility:	Not soluble in water. Soluble in most organic solvents
Melting point:	Data Not Available	Evaporation Rate:	Data Not Available
Boiling point:	Data not available	Vapor Pressure:	Data Not Available
Flash Point:	Data Not Available		



### Section 10: Stability and Reactivity

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**Appropriate Method of disposal:** Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations .

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### Section 15 - Regulatory Information

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