

**Product name: TUTA ROPES**

## 1. Identification of the substance/mixture and of the company

### Product identifier:

Trade name: TUTA ROPES

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

This product contains mixture of (E,Z,Z)-3,8,11-tetradecatrienyl acetate, (E,Z)-3,8-tetradecadienyl acetate and stabilizers.

Tomato leaf miner (*Tuta absoluta*) pheromone for mating disruption.

### Important Notice

This product contains mixture.

This SDS applies only in case that the container breaks and the mixture is set free.

All information given hereinafter refer to the contained mixture, the product is safe for use.

Due to the small amount of the chemicals in the product, in case that the container is damaged, a spill of the mixture is highly unlikely.

### Details of the supplier of the safety data sheet:

#### Shin-Etsu Chemical Co., Ltd.

Organic Chemicals Division Fine Chemicals Department  
6-1 Ohtemachi 2-chome, Chiyoda-ku, Tokyo, 100-0004, Japan

Tel: 81-3-3246-5280

Fax: 81-3-3246-5371

### Emergency telephone number:

Emergency Telephone Number: 81-3-3246-5280 (Tokyo Japan) (9:00~18:00)  
81-25-545-5810 (Specialty Chemicals Research Center)

COMPANY URL: <http://www.shinetsu.co.jp>E-mail contact: [pheromone@shinetsu.jp](mailto:pheromone@shinetsu.jp)

## 2. Hazards identification

### 2.1 Classification of the substance:

#### GHS Classification

##### Physical Hazards

Flammable liquids: Not classified

Self-reactive substances: Not classified

Pyrophoric liquids: Not classified

Self-heating substances: Not classified

Substances which, in contact with water, emit flammable gases: Not classified

Oxidizing liquids: Not classified

##### Health Hazards

Acute toxicity: Not available

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Skin irritation: Category 2  
Eye irritation: Not available  
Respiratory sensitization: Not available  
Skin sensitization: Not available  
Germ cell mutagenicity: Not available  
Carcinogenicity: Not available  
Reproductive toxicity: Not available  
Specific target organ toxicity single exposure: Not available  
Specific target organ toxicity repeated exposure: Not available  
Aspiration hazard: Not available

**Environmental Hazards**

Acute aquatic toxicity: Not available  
Chronic aquatic toxicity: Not available

**2.2 Label elements**

Pictograms or symbols:



Signal word: "Warning"

Hazard Information:

H303: May be harmful if swallowed  
H333: May be harmful if inhaled  
H315: Causes skin irritation  
H320: May cause eye irritation

Precautionary statements:

P210: Away from Heat/Spark/Open flame/Ignition sources like a high temperature. – No smoking  
P261: Avoid breathing mist/vapours/spray/gas/fume/dust.  
P262: Do not get in eyes, on skin, or clothing.  
P264: Wash hands thoroughly after handling.  
P271: Use only in well-ventilated place or in open air.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352: If on skin: Wash with plenty of soap and water.  
P304+P340: In case of inhalation: Transfer to fresh air place, rest with easily respirable posture.  
P305+P351+P338: In case of eye contact: Wash with water carefully for several minutes. When easily take off contact lenses are worn, take them off.  
P332+P313: If skin irritation occurs: Get medical advice/attention.  
P337+P313: In case of holding eye irritation: Have medical doctor's diagnosis.  
P362+P364: Put off polluted wear and wash before reuse.

Precautionary statement for environment pollution:

P273: Avoid release to the environment without necessity.  
P391: Collect spillage.  
P501: Discard contents/container according to local regulations/ country laws.

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### 3. Composition / information on ingredients

#### Mixtures

Name	CAS -N° EU - N°	Classification (Reg. EC 1272/2008)	Concentration (%)
(E,Z,Z)-3,8,11-Tetradecatrienyl acetate	163041-94-9 N. A.	Skin Irrit. 2, H315	55 – 75
(E,Z)-3,8-Tetradecadienyl acetate	163041-87-0 N. A.	Skin Irrit. 2, H315	5.5 – 7.5

### 4. First aid measures

Persons using this product should consult a physician or other medical professional if an accident involving this product in injury. Specific first-aid measures are as follows:

**After inhalation:** Supply fresh air; seek medical advice in case of symptoms. When feeling woozy or badly, get medical attention. When victim vomiting, turn his face to sideway for taking breath.

**After skin contact:** Instantly wash with water and soap and rinse thoroughly. If skin irritation continues, seek medical advice. Take off all contaminated clothes.

**After eye contact:** Gently rinse the affected eyes, including under the eyelids, with clean water for at least 15 minutes. To make it effective, widen the eyelid with fingers and move the eyeball. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible. When wearing contact lenses, remove them and rinse with clean water for 15 minutes.

#### Prospective acute or late symptoms:

Eye or skin contact: reddening, pain, chemical attack.

Inhalation: dizziness, drowsiness, headache, nausea, weakness feeling.

### 5. Firefighting measures

When igniting high concentrated vapour or mist of this material, may explosion break out by the explosive decomposition. In high oxygen concentrated atmosphere, it has the possibility of combustion or explosion.

#### Extinguishing media:

Suitable extinguishing agents: CO<sub>2</sub>, extinguishing powder or alcohol-resistant foam.

Unsuitable extinguishing agents: High volume water jet.

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

If exposed to heat or flame, it decomposes and may generate toxic irritating gases. Special hazards caused by the material, its products of combustion or flue gases: Carbon monoxide and carbon dioxide.

#### Specific extinction method:

Work for firefighting from windward. Fire could be expanded by water spray, use appropriate extinguishing media. Transfer the container from near fire to out of area, if safely possible. If it is impossible, cooling down the

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container by plenty of water spraying. Don't use high volume water jet.

**Advice for firefighters:**

Use self-contained breathing apparatus, chemical cartridge respirator for organic gases, gloves, or other protective equipments for fire-fighting.

Additional information: Collect contaminated firefighting water separately. It must not enter drains.

**6. Accidental release measures**

Mark off the area near around leakage by the roping, and seal off except authorized.

**Note for preventing hazards:**

Enough time ventilation is necessary until finishing the clean-up in the case of indoor leakage. Wear and use self-contained breathing apparatus, chemical cartridge respirator for organic gases, protective gloves, protective goggle, protective boots or other protective apparels for handling vapour concentrated around.

**Environmental precautions:**

Do not allow to enter drainage system, surface or ground water.

**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to federal law. Ensure adequate ventilation. Mark contaminated area. After indoor leakage ensure enough ventilation to finish cleaning up. Wear and use self-contained breathing apparatus, chemical cartridge respirator for organic gases, protective gloves, protective goggle, protective boots or other protective equipment.

**For small spills:** Absorb spill with dry sand, earth or charcoal, then place in chemical waste container so as not to run out to sewage or drainage trench or penetration into.

**For large spills:** Collect with pump and transfer to a metal container with seal. Absorb spill with dry sand or charcoal, and prevent spill from entering sewers, watercourses or low areas, and prevent the penetration into the ground. Mop up the residual spill with charcoal or absorbent materials.

Contaminated absorbents must be disposed of by appropriate measures.

Work at the position of windward.

**Note for preventing environment hazards:**

Salvage by removal methods as possible, comply environmental benchmarks of sewage, earth, water source.

**7. Handling and storage****General items:**

Smoking, eating and drinking should be prohibited in the handling or storage area. Keep away from open flames, hot surface and sources of ignition.

**Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace. Avoid contact to skin, eye and clothing.

Keep ignition sources away. Do not smoke, eat or drink in work areas. Do not breathe vapours/mists.

If you become bothered by odour, please stop working and take "first-aid measures" specified in the product SDS. To insulate you from unnecessary odour, it may be recommended to wear a protective apparatus, such as a mask, during operations.

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**Conditions for safe storage, including any incompatibilities:**

Observe all local and national regulations for storage of water polluting products.  
Do not store together with oxidizing and acidic materials.  
Store in cool, dry conditions in tightly closed containers.  
Protect from heat and direct sunlight.

**8. Exposure controls and personal protection****Control parameters:**

This SDS applies only in case that container breaks and the chemicals are set free. All information given hereinafter refer to the contained chemicals.

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Exposure controls:**

Keep away from foodstuffs, beverages and food. Instantly remove any contaminated garments. Avoid contact with eyes and skin. Wash hands during breaks and at the end of the work.

Hand protection: Protective gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Eye protection: Protective goggles. Face shield etc.

Protective wear for skin and body: Protective boots. Protective apron.

**Exposure limits:**

ACGH: Not listed.

OSHA: Not listed.

**9. Physical and chemical properties****9.1 Information on basic physical and chemical properties**

	(E,Z,Z)-3,8,11-Tetradecatrienyl acetate and (E,Z)-3,8-tetradecadienyl acetate
a) Appearance:	light yellow transparent
b) Odour:	mild waxy and sweet
c) Odour threshold:	None
d) pH (pH meter):	No information
e) Melting point/freezing point:	No information
f) Initial boiling point, boiling range (OECD 103):	150 - 157°C / 3mmHg
g) Flash point	156°C (Cleveland open cup)
h) Evaporation rate:	No information
i) Flammability (solid/gas)	No information
j) Upper/lower flammability or explosive limits:	No information
k) Vapour pressure (calculated):	No information
l) Vapour density:	No information
m) Relative density (pycometer method):	No information

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n) Solubilit(ies) (OECD 105):	Soluble in n-hexane, n-pentane, benzene. Toluene, methanol, ethanol, ether, acetone, methylene chloride, chloroform, acetonitrile, THF, DMF, acetic acid, etc. Insoluble in DMSO and ethylene glycol
o) Partition coefficient: n-octanol/water (OECD 107):	No information
p) Auto-ignition temperature:	Not tested
q) Decomposition temperature:	No information
r) Viscosity (Ubbelohde's method):	No information
s) Explosive properties:	Not explosive (judgement)
t) Oxidising properties:	Not explosive (judgement)

## 9.2 Other information

None

## 10. Stability and reactivity

### Reactivity:

May react with oxygen and strong oxidizing agents, such as chlorates, peroxides, etc. Conditions to avoid heat, flames and sparks. Material to avoid oxidizing agents.

### Chemical stability:

This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### Conditions to avoid:

Avoid contact with excessive heat, sparks or open flame.

### Incompatible materials:

Oxidizing agents.

### Hazardous decomposition products:

May react with oxygen and strong oxidizing agents, such as chlorates, peroxides, etc.

## 11. Toxicological information

### 11.1 Information on toxicological effects

SCLP: (E,Z,Z)-3,8,11-Tetradecatrienyl acetate and (E,Z)-3,8-tetradecadienyl acetate

	Toxicity Criteria	Toxicity Information	Chemical Constituent
Acute toxicity	LD <sub>50</sub> (oral/rat)	No information	SCLP
	LD <sub>50</sub> (oral/rat)	No information	
	LC <sub>50</sub> (inhalation/rat)	No information	
Skin irritation	Rabbit	Slight to moderate skin irritation	SCLP (Similar substance)

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Eye irritation	Rabbit	No information	SCLP
Sensitization		No sensitizing effect known	SCLP
Mutagenicity		No information	SCLP
Carcinogenicity		Not listed NTP	SCLP
		Not listed IARC	
		Not listed OSHA	
Ames test		Not mutagenic in Ames test	SCLP
Reproductive Toxicity		No information	SCLP
STOST	Inhalation		
Aspiration Hazard			

## 12. Ecological information

### 12.1 Toxicity

#### (E,Z,Z)-3,8,11-Tetradecatrienyl acetate

No information

#### (E,Z)-3,8-Tetradecadienyl acetate

No information

### 12.2 Persistence and degradability

The ingredients are biodegradable.

### 12.3 Bioaccumulative potential

No data available. Exposure not likely.

### 12.4 Mobility in soil

No data available. Exposure not likely.

### 12.5 Results of PBT and vPvB assessment

#### (E,Z,Z)-3,8,11-Tetradecatrienyl acetate

No data available.

#### (E,Z)-3,8-Tetradecadienyl acetate

No data available.

### 12.6 Other adverse effects

None

## 13. Disposal considerations

### Waste treatment methods:

Use this material for its intended purpose. Do not allow product to reach sewage system. If this material must be discarded, meet to criteria of hazardous waste as defined by US EPA or other State and local regulations. If this material classified as hazardous waste, federal law require disposal at licensed hazardous waste disposal facility. When contaminated package is disposed, treated as same as material

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#### **14. Transport information**

**UN number: none**

**UN proper shipping name: none**

**Transport hazard class: none**

**Packing group: none**

**Special precautions for user: none**

#### **15. Regulatory information**

**Safety, health and environmental/legislation specific for the substance or mixture:**

Based on toxicological studies in published literature, there is no risk and safety phrases to assign for this product.

**Chemical safety assessment:**

The active ingredients are listed in the following inventors: TSCA, NSDL.

#### **16. Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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*This safety data sheet is offered solely for your information, consideration and investigation. The data described in this SDS consist of data on literature, our acquisition data and analogical inference by data of similar chemical substances or products. Shin-Etsu Chemical Co., Ltd. provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. Final determination of suitability of any material is the sole responsibility of the user.*

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