



# Safety Data Sheet

## Pheromone for *Tuta absoluta*

Safety Data Sheet dated 1/3/2023, version 1

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

#### 1.1. Product identifier

Mixture identification:  
Trade name: Pheromone for *Tuta absoluta*  
Trade code: P-01069

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

Recommended use:

Pheromone dispenser for *Tuta absoluta* to be used inside monitoring devices to detect the presence of this pest.

Uses advised against:

the mixture has to be used for the mentioned application and use.

#### 1.3. Details of the supplier of the safety data sheet

Company:  
GEA SRL  
Via A. B. Sabin, 31  
20019 - Settimo Milanese (MI) - ITALIA  
Tel: +39 02 33514890  
Fax: +39 02 00665233

Competent person responsible for the safety data sheet:

[msds@geaitaly.it](mailto:msds@geaitaly.it)

#### 1.4. Emergency telephone number

Milan Poison Control Centre + 39 02 66101029 (CAV Ospedale Niguarda Ca` Granda - Milan)  
Pavia Poison Control Centre + 39 0382 24444 (CAV IRCCS Fondazione Maugeri - Pavia)  
Bergamo Poison Control Centre + 39 800 883300 (CAV Ospedali Riuniti - Bergamo)  
Florence Poison Control Centre + 39 055 7947819 (CAV Ospedale Careggi - Florence)  
Rome Poison Control Centre + 39 06 3054343 (CAV Policlinico Gemelli - Rome)  
Rome Poison Control Centre + 39 06 49978000 (CAV Policlinico Umberto I - Rome)  
Rome Poison Control Centre + 39 06 68593726 (CAV Ospedale Pediatrico Bambino Gesù - Roma)  
Naples Poison Control Centre +39 081 5453333 (CAV Ospedale Cardarelli - Naples)  
Foggia Poison Control Centre +39 800183459 (CAV Azienda Ospedaliera Universitaria - Foggia)  
Verona Poison Control Centre +39 800011858 (CAV Azienda Ospedaliera Integrata - Verona)

Company emergency telephone number: +39 02 33514890 (available from Monday to Friday from 9 a.m. to 6 p.m., for technical assistance only).

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

#### 2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Hazard pictograms:

None



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Hazard statements:

None

Precautionary statements:

None

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

#### 2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$

Other Hazards:

No other hazards

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

N.A.

#### 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

| Qty          | Name        | Ident. Number               | Classification                |
|--------------|-------------|-----------------------------|-------------------------------|
| $\geq 0.1\%$ | cyclohexane | Index number: 601-017-00-1  | 2.6/2 Flam. Liq. 2 H225       |
| - <          |             | CAS: 110-82-7               | 3.10/1 Asp. Tox. 1 H304       |
| 0.25%        |             | EC: 203-806-2               | 3.2/2 Skin Irrit. 2 H315      |
|              |             | REACH No.: 01-2119463273-41 | 3.8/3 STOT SE 3 H336          |
|              |             |                             | 4.1/A1 Aquatic Acute 1 H400   |
|              |             |                             | 4.1/C1 Aquatic Chronic 1 H410 |

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

Treatment:

None



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#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

Suitable extinguishing media:

All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons:

None

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

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

##### 5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

#### SECTION 6: Accidental release measures

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

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

##### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

##### 6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

##### 6.4. Reference to other sections

See also section 8 and 13

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Do not eat or drink while working.

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

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

##### 7.3. Specific end use(s)

None in particular

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

cyclohexane - CAS: 110-82-7

- OEL Type: IOELV - TWA: 700 mg/m<sup>3</sup>, 200 ppm

- OEL Type: EU - TWA(8h): 700 mg/m<sup>3</sup>, 200 ppm



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- OEL Type: ACGIH - TWA(8h): 100 ppm - Notes: CNS impair

#### DNEL Exposure Limit Values

cyclohexane - CAS: 110-82-7

Worker Industry: 2016 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects - Notes: (Rat)

Worker Industry: 1400 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects - Notes: (Fish)

Worker Industry: 700 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 700 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 1400 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

#### PNEC Exposure Limit Values

cyclohexane - CAS: 110-82-7

Target: Fresh Water - Value: 0.207 mg/l

Target: Freshwater sediments - Value: 16.68 mg/kg

Target: Marine water - Value: 0.207 mg/l

Target: Marine water sediments - Value: 16.68 mg/l

Target: STP - Value: 3.24 mg/l

Target: Soil - Value: 3.38 mg/kg

Target: 11 - Value: 0.207 mg/l

### 8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Wear protective gloves.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

## SECTION 9: Physical and chemical properties

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

| Properties  | Value       | Method: | Notes |
|---|-------------|---------|-------|
| Physical state:   | Solid       | --      | --    |
| Colour:   | N.A.        | --      | --    |
| Odour:  | Sui generis | --      | --    |
| Melting point/freezing point:                             | N.A.        | --      | --    |
| Boiling point or initial boiling point and boiling range: | N.A.        | --      | --    |
| Flammability:   | N.A.        | --      | --    |
| Lower and upper explosion limit:                          | N.A.        | --      | --    |
| Flash point:  | N.A.        | --      | --    |



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|  |      |    |    |
|--|------|----|----|
| Auto-ignition temperature:                         | N.A. | -- | -- |
| Decomposition temperature:                         | N.A. | -- | -- |
| pH:  | N.A. | -- | -- |
| Kinematic viscosity:                               | N.A. | -- | -- |
| Solubility in water:                               | N.A. | -- | -- |
| Solubility in oil:                                 | N.A. | -- | -- |
| Partition coefficient n-octanol/water (log value): | N.A. | -- | -- |
| Vapour pressure:                                   | N.A. | -- | -- |
| Density and/or relative density:                   | N.A. | -- | -- |
| Relative vapour density:                           | N.A. | -- | -- |
| Particle characteristics:                          |      |    |    |
| Particle size:                                     | N.A. | -- | -- |

#### 9.2. Other information

No other relevant information

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

None

### 10.4. Conditions to avoid

Stable under normal conditions.

### 10.5. Incompatible materials

None in particular.

### 10.6. Hazardous decomposition products

None.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the product:

Pheromone for *Tuta absoluta*

a) Acute toxicity

Not classified

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

Not classified

Based on available data, the classification criteria are not met

c) serious eye damage/irritation

Not classified

Based on available data, the classification criteria are not met

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified



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- Based on available data, the classification criteria are not met
- f) Carcinogenicity  
Not classified  
Based on available data, the classification criteria are not met
  - g) Reproductive toxicity  
Not classified  
Based on available data, the classification criteria are not met
  - h) STOT-single exposure  
Not classified  
Based on available data, the classification criteria are not met
  - i) STOT-repeated exposure  
Not classified  
Based on available data, the classification criteria are not met
  - j) aspiration hazard  
Not classified  
Based on available data, the classification criteria are not met
- Toxicological information of the main substances found in the product:  
cyclohexane - CAS: 110-82-7
- a) Acute toxicity:  
Test: LD50 - Route: Oral - Species: Rat = 12705 mg/kg  
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg
  - b) skin corrosion/irritation:  
Notes: Causes skin irritation
  - h) STOT-single exposure:  
Notes: It can cause drowsiness or dizziness.
  - j) aspiration hazard:  
Notes: Can be lethal in case of ingestion and penetration into the airways
- 11.2. Information on other hazards  
Endocrine disrupting properties:  
No endocrine disruptor substances present in concentration  $\geq 0.1\%$

## SECTION 12: Ecological information

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.  
Pheromone for *Tuta absoluta*

Not classified for environmental hazards

Based on available data, the classification criteria are not met  
cyclohexane - CAS: 110-82-7

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 0.9 mg/l - Duration h: 48

Endpoint: 5 - Species: Fish = 4.53 mg/l - Duration h: 96

Endpoint: 5 - Species: Algae = 3.4 mg/l - Duration h: 72

### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

cyclohexane - CAS: 110-82-7

Notes: BOD35/thOD=67%

### 12.4. Mobility in soil

cyclohexane - CAS: 110-82-7

Notes: Very toxic to fish

### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None



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- 12.6. Endocrine disrupting properties  
No endocrine disruptor substances present in concentration  $\geq 0.1\%$
- 12.7. Other adverse effects  
None

#### SECTION 13: Disposal considerations

##### 13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

#### SECTION 14: Transport information

##### 14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

##### 14.2. UN proper shipping name

N.A.

##### 14.3. Transport hazard class(es)

N.A.

##### 14.4. Packing group

N.A.

##### 14.5. Environmental hazards

N.A.

##### 14.6. Special precautions for user

N.A.

##### 14.7. Maritime transport in bulk according to IMO instruments

N.A.

#### SECTION 15: Regulatory information

##### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
Regulation (EU) n. 2020/878  
Regulation (EU) n. 286/2011 (ATP 2 CLP)  
Regulation (EU) n. 618/2012 (ATP 3 CLP)  
Regulation (EU) n. 487/2013 (ATP 4 CLP)  
Regulation (EU) n. 944/2013 (ATP 5 CLP)  
Regulation (EU) n. 605/2014 (ATP 6 CLP)  
Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
Regulation (EU) n. 2016/918 (ATP 8 CLP)  
Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
Regulation (EU) n. 2017/776 (ATP 10 CLP)  
Regulation (EU) n. 2018/669 (ATP 11 CLP)  
Regulation (EU) n. 2018/1480 (ATP 13 CLP)  
Regulation (EU) n. 2019/521 (ATP 12 CLP)  
Regulation (EU) n. 2020/217 (ATP 14 CLP)  
Regulation (EU) n. 2020/1182 (ATP 15 CLP)  
Regulation (EU) n. 2021/643 (ATP 16 CLP)  
Regulation (EU) n. 2021/849 (ATP 17 CLP)  
Regulation (EU) n. 2022/692 (ATP 18 CLP)



## Safety Data Sheet

### Pheromone for *Tuta absoluta*

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 40

Restrictions related to the substances contained:

Restriction 57

Restriction 75

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

cyclohexane

### SECTION 16: Other information

Full text of phrases referred to in Section 3:

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

| Hazard class and hazard category | Code   | Description  |
|----------------------------------|--------|--|
| Flam. Liq. 2                     | 2.6/2  | Flammable liquid, Category 2                                 |
| Asp. Tox. 1                      | 3.10/1 | Aspiration hazard, Category 1                                |
| Skin Irrit. 2                    | 3.2/2  | Skin irritation, Category 2                                  |
| STOT SE 3                        | 3.8/3  | Specific target organ toxicity - single exposure, Category 3 |
| Aquatic Acute 1                  | 4.1/A1 | Acute aquatic hazard, category 1                             |
| Aquatic Chronic 1                | 4.1/C1 | Chronic (long term) aquatic hazard, category 1               |

Paragraphs modified from the previous revision:

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

SECTION 2: Hazards identification

SECTION 7: Handling and storage

SECTION 8: Exposure controls/personal protection

SECTION 9: Physical and chemical properties

SECTION 11: Toxicological information

SECTION 12: Ecological information

SECTION 14: Transport information

SECTION 15: Regulatory information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:





## Safety Data Sheet

### Pheromone for *Tuta absoluta*

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

|             |  |
|-------------|--|
| ADR:        | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| ATE:        | Acute Toxicity Estimate  |
| ATEmix:     | Acute toxicity Estimate (Mixtures)   |
| CAS:        | Chemical Abstracts Service (division of the American Chemical Society).              |
| CLP:        | Classification, Labeling, Packaging.   |
| DNEL:       | Derived No Effect Level.   |
| EINECS:     | European Inventory of Existing Commercial Chemical Substances.                       |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany.  |
| GHS:        | Globally Harmonized System of Classification and Labeling of Chemicals.              |
| IATA:       | International Air Transport Association.   |
| IATA-DGR:   | Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  |
| ICAO:       | International Civil Aviation Organization.   |
| ICAO-TI:    | Technical Instructions by the "International Civil Aviation Organization" (ICAO).    |
| IMDG:       | International Maritime Code for Dangerous Goods.                                     |
| INCI:       | International Nomenclature of Cosmetic Ingredients.                                  |
| KSt:        | Explosion coefficient.   |
| LC50:       | Lethal concentration, for 50 percent of test population.                             |
| LD50:       | Lethal dose, for 50 percent of test population.                                      |
| PNEC:       | Predicted No Effect Concentration.   |
| RID:        | Regulation Concerning the International Transport of Dangerous Goods by Rail.        |
| STEL:       | Short Term Exposure limit.   |
| STOT:       | Specific Target Organ Toxicity.  |
| TLV:        | Threshold Limiting Value.  |
| TWA:        | Time-weighted average  |
| WGK:        | German Water Hazard Class.   |

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 16.09.2022

Version number 21

Revision: 16.09.2022

**Trade name: Cyclohexane**

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### Annex: Exposure scenario

- **Short title of the exposure scenario** Chemicals products for laboratory
- **Sector of Use** Industrial use.
- **Process category**
  - PROC10 Roller application or brushing
  - PROC15 Use as laboratory reagent
- **Environmental release category**
  - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- **Description of the activities / processes covered in the Exposure Scenario**  
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use** Customary application according to section 1.
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**  
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
- **Physical state** Fluid
- **Concentration of the substance in the mixture** Raw material.
- **Other operational conditions** Observe the general safety regulations when handling chemicals.
- **Other operational conditions affecting environmental exposure** Use only on hard ground.
- **Other operational conditions affecting worker exposure**
  - Avoid contact with the skin.
  - Take precautionary measures against static discharge.
  - Keep away from sources of ignition - No smoking.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures**
  - Keep good industrial hygiene.
  - Ensure that activities are executed by specialists or authorised personnel only.
  - Provide sufficient washing facilities.
  - Persons, who tend to skin diseases or other hypersensitivity reactions of the skin, should not handle the product.
  - Work clothes must not consist of textiles that exhibit dangerous melting behaviour in case of fire.
- **Technical protective measures**
  - Ensure good ventilation/exhaustion at the workplace.
  - Provide explosion-proof electrical equipment.
  - Only handle and refill product in closed systems or under local exhaust.
- **Personal protective measures**
  - Avoid contact with the skin.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Neoprene gloves
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - Protective gloves
    - Rubber gloves
    - Tightly sealed goggles
  - The usual precautionary measures are to be adhered to when handling chemicals.
  - Detailed measures on hand protection according to Safety Data Sheet, section 8.
  - Use suitable respiratory protective device only when aerosol or mist is formed.
  - Use suitable respiratory protective device when high concentrations are present.
  - Filter A/P2
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 16.09.2022

Version number 21

Revision: 16.09.2022

**Trade name: Cyclohexane**

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*Solvent resistant protective clothing*

· **Environmental protection measures**

*Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet.*

· **Water** *Do not allow to reach sewage system.*

· **Soil** *Prevent contamination of soil.*

· **Notes** *In case of unintended release of the product: See section 6 of the Safety Data Sheet.*

· **Disposal measures** *Ensure that waste is collected and contained.*

· **Disposal procedures**

*Must not be disposed together with household garbage. Do not allow product to reach sewage system.*

· **Waste type** *Partially emptied and uncleaned packaging*

· **Exposure estimation**

· **Worker (dermal)**

*The exposure estimation was carried out in accordance with ECETOC TRA.*

*The calculated value is smaller than the DNEL.*

· **Worker (inhalation)**

*The exposure estimation was carried out in accordance with ECETOC TRA.*

*The calculated value is smaller than the DNEL.*

· **Consumer** *Not relevant for this Exposure Scenario.*

· **Guidance for downstream users**

*Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.*

GB