



# MATERIAL SAFETY DATA SHEET

## TUTA 250 SC

### IDENTIFICATION OF THE SUPPLIER:

**AGRO CHEMICALS INDUSTRIES LTD**

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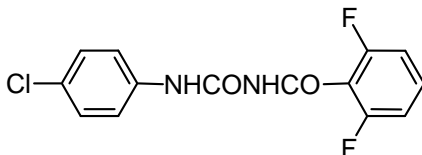
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### IDENTIFICATION OF THE PRODUCT:

**Trade name:** Tuta 25 SC  
**Uses:** Insecticide  
**Type of formulation:** Suspension Concentrate (SC)  
**Common name:** Diflubenzuron  
**Chemical name:** 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl)urea  
**Structural formula:**



### COMPOSITION OF PRODUCT:

**Active ingredient:**  
**Diflubenzuron** 25% w/v [35367-38-5]

**Inert ingredient:**  
**Dispersing & suspension gent** 9.4 % w/v  
**Solvent** up to 100%



## HAZARD IDENTIFICATION:

**Form:** suspension liquid

**Color:** off white to tan

**Odor:** Slight

**Hazard Summary:**

May cause eye and skin irritation.  
Prolonged and/ or repeated exposure may cause the following effects:  
Methemoglobinemia  
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**potential Health Effects:**

**Primary Routes of entry**

Skin absorption  
Eye contact  
Inhalation

**Aggravated Medical condition**

None known

**Inhalation:**

Short-term harmful health effects are not expected from vapor generated at ambient temperature.

**Skin:**

May irritant skin.

**Eyes:**

May irritant eyes.

**Ingestion:**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Exposure:**

Prolonged or repeated contact may cause the following: Methaemoglobinemia

**Symptoms of overexposure:**

The absorption of this product into the body may lead to the formation of methaemoglobin that, in sufficient concentration, causes cyanosis.

**Environmental Effects**

**Environmental Effects:**

Dangerous for the environment



## FIRST AID MEASURES:

- Inhalation:** If breathed in, move person into fresh air, give oxygen or artificial respiration if needed.  
In case of bluish discoloration (lips, ear lobes, fingernails), give oxygen as quickly as possible.  
Obtain medical attention.
- Skin contact:** If on clothes, remove clothes.  
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation occurs, seek medical advice/attention.  
Wash contaminated clothing before re-use.  
Destroy contaminated shoes.
- Eye contact:** In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If symptoms persist, call a physician.
- Ingestion:** Don't induce vomiting, give small amounts of water to drink, call a physician or poison control centre immediately, never give anything by mouth to an unconscious person.
- Notes to physician**
- Symptoms:** The absorption of this product into the body may lead to the formulation of methaemoglobine that, in sufficient concentration, causes cyanosis.
- Treatment:** Since reversion of methaemoglobin to haemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures.

## FIRE-FIGHTING MEASURES:

**Flammable properties:**

**Flash point:** 226° F (108° C)

**Fire fighting**

**Suitable extinguishing media:** Extinguishing media – large fires Alcohol-resistant foam





**Unsuitable extinguishing media:**

**Further information:**

Small fires: Carbon dioxide (CO<sub>2</sub>)

Dry chemical

Water spray

Water spray jet

Fight fires from a safe distance.

Move containers from fire area if possible.

Use water spray to cool unopened containers.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

**Protective equipment and precautions for firefighters**

**Specific hazards during fire fighting:** Burning produces noxious and toxic fumes.

**Special protective equipment for fire-fighters:** Body covering protective clothing, full 'turn-out' gear. Self contained breathing apparatus.

**ACCIDENTAL RELEASE MEASURES**

**Personal precautions:**

Evacuate personnel to safe areas.

Wear suitable protective clothing, gloves and eye/ face protection.

Avoid contact with skin and eyes.

Ventilate the area.

**Environmental precautions:**

Toxic to aquatic life.

Don't allow uncontrolled discharge of product into the environment.

Don't flush into surface water or sanitary sewer system.

**Methods for containment/ methods for cleaning up:**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Shovel into suitable container for disposal.





Large spills should be collected mechanically (remove by pumping) for disposal.

Ventilate the area.

**Additional advice:**

Keep in properly labeled containers.

Dispose of rinse water as waste water.

## HANDLING AND STORAGE:

### Handling

**Handling procedures:**

Handle and open container with care.

Protect from contamination.

Use only in well-ventilated areas.

In case of insufficient ventilation, wear suitable respiratory equipment.

Avoid inhalation, ingestion and contact with skin and eyes.

Wear suitable protective clothing, gloves and eye/ face protection.

Wash thoroughly after handling.

Keep container closed when not in use.

**Requirements for storage areas and containers:**

Keep containers tightly closed in a dry, cool and well-ventilated place.

Keep only in the original container.

**Other data:**

Stable at normal ambient temperature and pressure.

## EXPOSURE CONTROL/ PERSONAL PROTECTION:

### Exposure Guidelines

**Engineering measures:**

Use mechanical ventilation for general area control.

Ensure that extracted air cannot be returned to the workplace through the ventilation system.

Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment





**Eye protection:**

Safety glasses with side-shields or safety goggles

**Hand protection:**

Chemical resistant protective gloves

**Skin and body**

Long sleeved clothing

**protection:**

Remove and wash contaminated clothing before re-use.

Discard contaminated shoes.

To protect against splashes from pouring:

Rubber or plastic boots

Rubber or plastic apron

**Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/ vapor/ aerosol/ particulates) that may arise when handling the product. if this concentration is exceeded, self- contained breathing apparatus must be used.

**Hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice.

Wear suitable gloves and eye/ face protection.

Avoid contact with skin, eyes and clothing.

Don't inhale aerosol.

Ensure adequate ventilation, especially in confined areas.

When using don't eat, drink or smoking.

Wash thoroughly after handling.

Keep working clothes separately

Remove and wash contaminated clothing before re-use.

Contaminated work clothing should not be allowed out of the workplace.





## PHYSICAL AND CHEMICAL PROPERTIES:

<b>Color:</b>	Off white to tan liquid
<b>Odor:</b>	Slight odor
<b>PH:</b>	8 – 10
<b>Density:</b>	1.09 g/ ml $\pm$ 0.05
<b>Water solubility:</b>	Completely miscible

## STABILITY AND REACTIVITY:

<b>Materials to avoid:</b>	Remarks: Oxidizing agents Strong acids and strong bases.
<b>Hazardous decomposition product:</b>	Note: Carbon oxides Nitrogen oxides (NO <sub>x</sub> ) Sulphur oxides Hydrogen halides
<b>Hazardous reactions:</b>	Hazardous polymerization does not occur.

## TOXICOLOGICAL INFORMATION:

<b>Acute oral toxicity:</b>	LD <sub>50</sub> 4640 mg/ kg
<b>Acute inhalation toxicity:</b>	LC <sub>50</sub> > 2.49 mg/ l
<b>Acute dermal toxicity:</b>	LD <sub>50</sub> > 10000 mg/kg
<b>Skin irritation:</b>	Species: rabbit Result: No skin irritation Exposure time: 4 h
<b>Eye irritation:</b>	Species: rabbit Result: No eye irritation
<b>Skin sensitization:</b>	Species: guinea pig Classification: don't cause sensitization on laboratory animals.
<b>CMR effects:</b>	Carcinogenicity: animal testing didn't show any carcinogenic effects. Mutagenicity: animal testing didn't show any





mutagenic effects.

Teratogenicity: No effects on or via lactation

Reproductive toxicity: No toxicity to reproduction

## ECOLOGICAL INFORMATION:

<b>Toxicity to fish:</b>	LC <sub>50</sub> >0.13 mg/l Exposure time: 96 h Species: Cyprinodon sp. (minnow) LC <sub>50</sub> > 0.2 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout)
<b>Toxicity to daphnia and other aquatic invertebrates:</b>	EC <sub>50</sub> 0.003 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)
<b>Toxicity to algae:</b>	IC <sub>50</sub> > 0.3 mg/l Exposure time: 72 h NOEC 0.10 mg/l Species: Cyprinodon sp. (minnow)
<b>Toxicity to daphnia and other aquatic invertebrates: (chronic toxicity)</b>	NOEC < 6 mg/l Species: Daphnia magna (Water flea)
<b>Bioaccumulation:</b>	Bioconcentration factor (BCF): > 100
<b>Biodegradability:</b>	Result: No readily biodegradable.

## DISPOSAL CONSIDERATIONS

Dispose of waste material in compliance with all federal, state, and local regulations.

Pesticide wastes are toxic

Don't contaminate ponds, waterways or ditches with chemical or used container.

