



# MATERIAL SAFETY DATA SHEET

## MSDS

### Pascale Pro

#### IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD  
JORDAN - AMMAN  
P.O.Box 183020 Amman 11118 Jordan  
Fax. +962 6 5548220  
Tel. +962 6 5548224/5  
E-mail info@aci.com.jo.

#### IDENTIFICATION OF THE PRODUCT:

**Trade name:** Pascale pro  
**Uses:** Insecticide/Miticide  
**Type of formulation:** Suspension concentrate (SC)  
**Common name:** Diafenthiuron  
Cyantraniliprole  
**Chemical name:** Diafenthiuron: 1-tert-butyl-3-[4-phenoxy-2,6-di(propan-2-yl)phenyl]thiourea  
Cyantraniliprole : 3-bromo-1-(3-chloro-2-pyridyl)-4'-cyano-2'-methyl-6'-(methylcarbamoyl)pyrazole-5-carboxanilide  
**Empirical formula:** Diafenthiuron : C<sub>23</sub>H<sub>32</sub>N<sub>2</sub>O<sub>5</sub>  
Cyantraniliprole: C<sub>19</sub>H<sub>14</sub>BrClN<sub>6</sub>O<sub>2</sub>

#### COMPOSITION OF PRODUCT:

Contents	Amount in % w/v
Cyantraniliprole (a.i)	8
Diafenthiuron (a.i)	40
Inert materials Up to 1 L	

#### HAZARD IDENTIFICATION:

##### GHS Classification

Acute toxicity (Inhalation): Category 4

Specific target organ toxicity -repeated exposure: Category 2 (Lungs)

##### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements: H332 Harmful if inhaled.

H373 May cause damage to organs (Lungs) through prolonged or repeated exposure.

Precautionary statements

**Prevention:**

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P271 Use only outdoors or in a well-ventilated area.

Response:

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known

## **FIRST AID MEASURES:**

General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

If inhaled: Move the victim to fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Keep patient warm and at rest.

Call a physician or poison control centre immediately.

In case of skin contact : Take off all contaminated clothing immediately.

Wash off immediately with plenty of water.

If skin irritation persists, call a physician.

Wash contaminated clothing before re-use.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses.

Immediate medical attention is required.

If swallowed: If swallowed, seek medical advice immediately and show this container or label.

Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed:

Nonspecific No symptoms known or expected.



Notes to physician: There is no specific antidote available.  
Treat symptomatically.

### **FIRE-FIGHTING MEASURES:**

Suitable extinguishing media: Extinguishing media - small fires

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

Extinguishing media - large fires

Alcohol-resistant foam or

Water spray

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread Fire.

Specific hazards during firefighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).

Exposure to decomposition products may be a hazard to health.

Specific extinguishing methods: Do not allow run-off from firefighting to enter drains or water courses.

Cool closed containers exposed to fire with water spray.

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

Hazchem Code: •3Z

### **ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures:

Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Do not flush into surface water or sanitary sewer system.

If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Clean contaminated surface thoroughly.

Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.



## HANDLING AND STORAGE:

Advice on safe handling: No special protective measures against fire required.

Avoid contact with skin and eyes.

When using do not eat, drink or smoke.

For personal protection see section 8.

Conditions for safe storage: No special storage conditions required.

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

Place.

Keep out of the reach of children.

Keep away from food, drink and animal feedingstuffs.

## EXPOSURE CONTROL/ PERSONAL PROTECTION:

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
diafenthiuron	80060-09-9	TWA	0.2 mg/m <sup>3</sup> (Skin)	Syngenta
cyantraniliprole	736994-63-1	TWA	5 mg/m <sup>3</sup>	Syngenta
propane-1,2-diol	57-55-6	TWA (particulate)	10 mg/m <sup>3</sup>	AU OEL
		TWA (Total vapour and particles)	150 ppm 474 mg/m <sup>3</sup>	AU OEL

Engineering measures : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE

CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment:



Respirator with a half face mask

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

Hand protection Material : Nitrile rubber

Break through time : > 480 min

Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : No special protective equipment required.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate:

Impervious clothing

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.

When selecting personal protective equipment, seek appropriate professional advice.

Personal protective equipment should comply with relevant national standards

## PHYSICAL AND CHEMICAL PROPERTIES:

Appearance : suspension

Colour : white

Odour : No data available

Odour Threshold : No data available



pH :5  
Concentration: 100 % w/v  
Melting point/range : No data available  
Boiling point/boiling range : No data available  
Flash point : Method: Pensky-Martens closed cup does not flash  
Evaporation rate : No data available  
Flammability (solid, gas) : No data available  
Upper explosion limit / Upper flammability limit : No data available  
Lower explosion limit / Lower flammability limit : No data available  
Vapour pressure : No data available  
Relative vapour density : No data available  
Density : 1.09 g/l (20 °C)  
Solubility(ies)  
Water solubility : No data available  
Solubility in other solvents : No data available  
Partition coefficient: n octanol/  
Water : No data available  
Auto-ignition temperature: 490 °C  
Decomposition temperature: No data available  
Viscosity  
Viscosity, dynamic : No data available  
Viscosity, kinematic : No data available  
Explosive properties : Not explosive  
Oxidizing properties : The substance or mixture is not classified as oxidizing.  
Particle size : No data available

### **STABILITY AND REACTIVITY:**

Reactivity : None reasonably foreseeable.  
Chemical stability : Stable under normal conditions.  
Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.  
Conditions to avoid : No decomposition if used as directed.  
Incompatible materials : None known.  
Hazardous decomposition products : No hazardous decomposition products are known.



## TOXICOLOGICAL INFORMATION:

Exposure routes : Ingestion  
Inhalation  
Skin contact  
Eye contact



### Acute toxicity

#### Product:

- Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male and female): > 0.693 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The component/mixture is moderately toxic after short term inhalation.
- Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

#### Components:

##### **diafenthiuron:**

- Acute oral toxicity : LD50 (Rat): 2,068 mg/kg
- Acute inhalation toxicity : LC50 (Rat): 0.558 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist
- Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

##### **cyantraniliprole:**

- Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male and female): > 5.2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

### Skin corrosion/irritation

#### Product:

- Species : Rabbit
- Result : No skin irritation

#### Components:

##### **diafenthiuron:**

- Species : Rabbit
- Result : No skin irritation





**cyantraniliprole:**

Species : Rabbit  
Result : No skin irritation

**residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:**

Method : in vitro skin corrosion test  
Result : Irritating to skin.

**Serious eye damage/eye irritation**

**Product:**

Species : Rabbit  
Result : No eye irritation

**Components:**

**diafenthiuron:**

Species : Rabbit  
Result : No eye irritation

**cyantraniliprole:**

Species : Rabbit  
Result : No eye irritation

**residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:**

Result : Risk of serious damage to eyes.  
Method : in vitro eye irritation test

**Respiratory or skin sensitisation**

**Product:**

Test Type : Local lymph node assay (LLNA)  
Species : Mouse  
Result : Did not cause sensitisation on laboratory animals.

**Components:**

**diafenthiuron:**

Species : Guinea pig  
Result : A weak skin sensitizer in animal tests

**cyantraniliprole:**

Test Type : mouse lymphoma cells  
Species : Mouse  
Result : Did not cause sensitisation on laboratory animals.



### Chronic toxicity

### Germ cell mutagenicity

#### Components:

#### **diafenthuron:**

Germ cell mutagenicity - Assessment : Did not show mutagenic or teratogenic effects in animal experiments.

#### **cyantraniliprole:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

### Carcinogenicity

#### Components:

#### **diafenthuron:**

Carcinogenicity - Assessment : In animal studies (rat, mouse, dog), prolonged exposure to diafenthuron has been shown to produce lung damage. In mice, chronic oral administration has produced lung tumours at high dose levels.

#### **cyantraniliprole:**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

### Reproductive toxicity

#### Components:

#### **diafenthuron:**

Reproductive toxicity - Assessment : No toxicity to reproduction

#### **cyantraniliprole:**

Reproductive toxicity - Assessment : No toxicity to reproduction

### STOT - repeated exposure

#### Components:

#### **diafenthuron:**

Target Organs Assessment : Lungs  
: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

#### **cyantraniliprole:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.



## ECOLOGICAL INFORMATION:

### Ecotoxicity

#### Product:

- Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 0.023 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0063 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 100 mg/l  
Exposure time: 96 h
- NOEC (Raphidocelis subcapitata (freshwater green alga)): 3.2 mg/l  
Exposure time: 96 h

#### Components:

##### **diafenthuron:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.002 mg/l  
Exposure time: 96 h
- LC50 (Ictalurus punctatus (channel catfish)): 0.0013 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.00015 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.059 mg/l  
Exposure time: 96 h
- NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.059 mg/l  
Exposure time: 96 h  
Remarks: No toxicity at the limit of solubility
- M-Factor (Acute aquatic toxicity) : 1,000
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.000018 mg/l  
Exposure time: 21 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0011 µg/l  
Exposure time: 21 d
- M-Factor (Chronic aquatic toxicity) : 10,000

##### **cyantraniliprole:**



Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 12.6 mg/l Exposure time: 96 h
	LC50 (Cyprinodon variegatus (sheepshead minnow)): > 12 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.0204 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 13 mg/l Exposure time: 72 h
	NOEC (Raphidocelis subcapitata (freshwater green alga)): 3.2 mg/l End point: Growth rate Exposure time: 72 h
M-Factor (Acute aquatic toxicity)	: 10
Toxicity to fish (Chronic toxicity)	: NOEC (Cyprinodon variegatus (sheepshead minnow)): 2.9 mg/l Exposure time: 28 d
	NOEC (Oncorhynchus mykiss (rainbow trout)): 10.7 mg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 0.00656 mg/l Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	: 10

#### **Persistence and degradability**

##### **Components:**

##### **diafenthiuron:**

Biodegradability : Remarks: No data available

##### **cyantraniliprole:**

Biodegradability : Result: Not readily biodegradable.

##### **residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:**

Biodegradability : Result: Not readily biodegradable.

#### **Bioaccumulative potential**

##### **Components:**

##### **diafenthiuron:**



Bioaccumulation : Remarks: Bioaccumulates

Partition coefficient: n-octanol/water : log Pow: 5.76 (25 °C)

**cyantraniliprole:**

Bioaccumulation : Bioconcentration factor (BCF): < 1  
Remarks: Does not bioaccumulate.

**Mobility in soil**

**Components:**

**diafenthiuron:**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Remarks: Product is not persistent.

**cyantraniliprole:**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Remarks: No data available

**Other adverse effects**

**Components:**

**diafenthiuron:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**cyantraniliprole:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

## DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues: Do not contaminate ponds, waterways or ditches with chemical or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or incineration.

If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Non-returnable containers:

Triple rinse containers.

Add rinsings to spray tank If recycling, replace cap and return clean containers to recycler or designated collection point. Containers marked with



the drumMUSTER container logo can be taken to a drumMUSTER collection site (02 6206 6868, www.drummuster.org.au).

Empty containers can be landfilled, when in accordance with the local regulations.

If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Returnable containers:

Empty contents fully into application equipment. Close all Valves and return to point of supply for refill or storage.

## TRANSPORT INFORMATION:

### International Regulations

#### UNRTDG

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIAFENTHIURON AND CYANTRANILIPROLE)  
Class : 9  
Packing group : III  
Labels : 9

#### IATA-DGR

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (DIAFENTHIURON AND CYANTRANILIPROLE)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Environmentally hazardous : yes

#### IMDG-Code

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIAFENTHIURON AND CYANTRANILIPROLE)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

ADG



UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(DIAFENTHIURON AND CYANTRANILIPROLE)  
Class : 9  
Packing group : III  
Labels : 9  
Hazchem Code : •3Z  
Remarks : Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Code for the Transport of Dangerous Goods (ADG). This applies when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs per ADG Special Provision AU01.

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.