



Safety Data Sheet dated 3/4/2014, version 1

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

### 1.1. Product identifier

Mixture identification:  
Trade name: DOMARK 10 EC  
Trade code: 5765

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

Agricultural use  
Other use not admitted

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

Company:  
ISAGRO S.p.A. – Via Caldera, 21 – 20153 – Milan - Italy  
Emergency telephone number of the company and/or of an authorised advisory centre:  
Tel.: 02 40 901 276  
Competent person responsible for the safety data sheet:  
msds@isagro.it

### 1.4 Emergency telephone number

QSE Department (office hours: 9.00 – 18.00): Phone n.. ++39 02 40901276

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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture







Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

Properties / Symbols:

Xn Harmful  
Xi Irritant  
N Dangerous for the environment

R Phrases:

R22 Harmful if swallowed.  
R36/38 Irritating to eyes and skin.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 Harmful: may cause lung damage if swallowed.  
R66 Repeated exposure may cause skin dryness or cracking.  
R67 Vapours may cause drowsiness and dizziness.

-  Warning, Acute Tox. 4, Harmful if swallowed.
-  Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways.
-  Warning, Skin Irrit. 2, Causes skin irritation.
-  Warning, Eye Irrit. 2, Causes serious eye irritation.
-  Warning, STOT SE 3, May cause drowsiness or dizziness.
-  Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:  
No other hazards

### 2.2. Label elements

Contents:

(+/-) 2-(2,4-dichlorophenyl)-3-(1 H -1,2,4-triazol-1-yl)propyl-1,1,2,2-tetrafluoroethylether naphthalene

Symbols:



Danger

Hazard statements:

H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P331 Do NOT induce vomiting.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P391 Collect spillage.  
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

2.3. Other hazards

VPVB\_CONTENT NONE - PBT\_CONTENT NONE

Other Hazards:

No other hazards

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### SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:

70% - 80% Naphta solvent aromatic

CAS: 64742-94-5

Xn,N; R51/53-65-66-67


3.10/1 Asp. Tox. 1 H304

3.8/3 STOT SE 3 H336

4.1/C2 Aquatic Chronic 2 H411

10% - 12.5% (+/-) 2-(2,4-dichlorophenyl)-3-(1 H -1,2,4-triazol-1-yl)propyl-1,1,2,2-tetrafluoroethylether; tetraconazole

Index number: 613-174-00-3, CAS: 112281-77-3, EC: 407-760-7  
Xn,N; R20/22-51/53


 4.1/C2 Aquatic Chronic 2 H411

 3.1/4/Oral Acute Tox. 4 H302

 3.1/4/Inhal Acute Tox. 4 H332

3% - 5% Amine neutralized ethoxylated

Xi,N; R38-41-51/53

 3.2/2 Skin Irrit. 2 H315

 3.3/1 Eye Dam. 1 H318

4.1/C3 Aquatic Chronic 3 H412

1% - 3% Benzenesulfonic acid, alkyl derivatives, calcium salt

01-2119560592-37-XXXX, CAS: 26264-06-2, EC: 247-557-8

Xi; R38-41


 3.2/2 Skin Irrit. 2 H315

 3.3/1 Eye Dam. 1 H318

1% - 3% 2-methylpropan-1-ol; iso-butanol

Index number: 603-108-00-1, CAS: 78-83-1, EC: 201-148-0

Xi; R10-37/38-41-67

 2.6/3 Flam. Liq. 3 H226

 3.8/3 STOT SE 3 H335

 3.2/2 Skin Irrit. 2 H315


 3.3/1 Eye Dam. 1 H318


 3.8/3 STOT SE 3 H336

0.5% - 1% naphthalene


Index number: 601-052-00-2, CAS: 91-20-3, EC: 202-049-5

Carc. Cat. 3,Xn,N; R22-40-50/53

 3.6/2 Carc. 2 H351

 4.1/A1 Aquatic Acute 1 H400

 4.1/C1 Aquatic Chronic 1 H410

 3.1/4/Oral Acute Tox. 4 H302

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

Give nothing to eat or drink.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

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## SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2 Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases which, at high temperatures, may contain toxic substances such as CO<sub>x</sub>, NO<sub>x</sub>, HCl and HF.

Burning produces heavy smoke.

5.3 Advice for fire-fighters

Use suitable breathing apparatus. Self-contained 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.

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## 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

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## SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

#### 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

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

naphthalene - CAS: 91-20-3

TLV TWA - 10 ppm, A4 - 52,43 mg/m<sup>3</sup>, A4 Skin

TLV STEL - 15 ppm, A4 - 78,64 mg/m<sup>3</sup>, A4 Skin

2-methylpropan-1-ol; iso-butanol - CAS: 78-83-1

TLV TWA - 50 ppm - 151,57 mg/m<sup>3</sup>

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

#### 8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

None

Environmental exposure controls:

None

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### SECTION 9: Physical and chemical properties

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

Appearance and colour: Yellowish liquid

Odour: Aromatic

Odour threshold: Not available

pH: Approx. 7 - 8 (1% in water) (CIPAC MT 75.3)

Melting point / freezing point: < - 10 °C

Initial boiling point and

boiling range: Not available

Solid/gas flammability: Not available

Upper/lower flammability

or explosive limits: Not available

Vapour density: Not available

Flash point: 64 °C (EEC A.9)

Evaporation rate: Not available

Vapour pressure: 0.18 mPa at 20 °C (referred to *tetraconazole*) (OECD 104)

|   |   |
|---|---|
| Relative density:                           | 0.94 kg/l (OECD 109)  |
| Solubility in water:                        | It gives emulsions  |
| Lipid solubility:                           | Soluble in most organic solvents                            |
| Partition coefficient<br>(n-octanol/water): | Log P = 3.56 (referred to <i>tetraconazole</i> ) (OECD 107) |
| Auto-ignition temperature:                  | Not available   |
| Decomposition temperature:                  | Not available   |
| Viscosity:                                  | Not available   |
| Explosive properties:                       | Not explosive (EECA.14)                                     |
| Oxidizing properties:                       | Not oxidizing (on the base of the components)               |

#### 9.2 Other information

|                                      |               |
|--------------------------------------|---------------|
| Miscibility:                         | Not available |
| Fat Solubility:                      | Not available |
| Conductivity:                        | Not available |
| Substance Groups relevant properties |               |

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### 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.

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### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

Data referred to preparation, *DOMARK 10 EC*:

Acute toxicity:  
LD50 (oral) (EPA 81-1):  
2370 mg/kg (male, rat)  
1760 mg/kg (female, rat)  
LD50 (dermal): > 2000 mg/kg (rabbit) (EPA 81-2)  
LC50 (4h) (inhalation): > 5.22 mg/l air (rat) (EPA 81-3)

Irritating power  
Skin: moderately irritant (EPA 81-5)  
Eyes: irritant (EPA 81-4)

Sensitization:  
Not sensitizing agent (Guinea Pig) (EPA 81-6)

Data referred to *tetraconazole*:

Carcinogenic effect (OECD 451):  
No carcinogenic effect

Mutagenic effect (EPA-TSCA 793400):  
No mutagenic effect

Teratogenic effect (EPA-TSCA 793400):  
No teratogenic effect

Reproduction toxicity (OECD 416):  
No evidence of reproduction toxicity

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as not available:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Adopt good working practices, so that the product is not released into the environment.

Data referred to the mixture, *DOMARK 10 EC*:

Fish -

Acute toxicity:

Rainbow trout, LC50 (96h): 3.8 mg/L (OECD 203)

Invertebrates -

Daphnia magna,

LC50 (48 h): 1.1 mg/L (OECD 202)

Algae -

Ankistrodesmus bibrarianus,

EC50 (72h): 2.2mg/L (OECD 201)

### 12.2 Persistence and degradability

Data referred to *tetraconazole*:

Water-sediment study:

DT50(whole system) = 310 – 372 g

DT50 (soil): 111.8 gg. (geometric mean on studies 4 soils)

Tetraconazole is stable to hydrolysis and is not expected its degradation by photolysis

Tetraconazole is not readily degradable

### 12.3 Bioaccumulative potential

Data referred to *tetraconazole*:

BCF = 35.7 (whole fish)

### 12.4 Mobility in soil

Data referred to *tetraconazole*:

Mobility: Koc from 531 to 1922 mL/g (4 soils)

II Tetraconazolo has low mobility in acid soils

### 12.5 Results of PBT and vPvB assessment

No PBT and/or vPvB in the mixture. No chemical safety report is required

### 12.6 Other adverse effects

No other adverse effect to be mentioned

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**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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**SECTION 14: Transport information****14.1. UN number**

ADR-UN number: 3082

IMDG-Un number: 3082

**14.2. UN proper shipping name**

ADR-Shipping Name: 3082

IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tetraconazole)

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

ADR-Class: 9

ADR-Label: 9

ADR - Hazard identification number: 90

IMDG-Class: 9

**14.4. Packing group**

ADR-Packing Group: III

IMDG-Packing group: III

**14.5. Environmental hazards**

Marine pollutant: Marine pollutant

**14.6. Special precautions for user**

IMDG-EMS: F-A, S-F

Limited Quantity: 5 L

Tunnel Restriction Code: (E)

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable

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**SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances). Dir. 99/45/EEC (Classification, packaging and labelling of dangerous preparations). Dir. 98/24/EC (Risks related to chemical agents at work). Dir. 2000/39/EC (Occupational exposure limit values); Dir. 2006/8/CE. Regulation (CE) n. 1907/2006 (REACH), Regulation (CE) n. 1272/2008 (CLP), Regulation (CE) n. 790/2009 (1° ATP CLP), Regulation (EU) n. 453/2010 (Annex I).

Where applicable, refer to the following regulatory provisions :

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

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

1999/13/EC (VOC directive)

**15.2. Chemical safety assessment**

Not requested

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**SECTION 16: Other information**

R-phrases in section 3:

R10 Flammable.

R20/22 Harmful by inhalation and if swallowed.

R22 Harmful if swallowed.



R37/38 Irritating to respiratory system and skin.  
R38 Irritating to skin.  
R40 Limited evidence of a carcinogenic effect.  
R41 Risk of serious damage to eyes.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 Harmful: may cause lung damage if swallowed.  
R66 Repeated exposure may cause skin dryness or cracking.  
R67 Vapours may cause drowsiness and dizziness.

H-statements in section 3:

H304 May be fatal if swallowed and enters airways.  
H336 May cause drowsiness or dizziness.  
H411 Toxic to aquatic life with long lasting effects.  
H302 Harmful if swallowed.  
H332 Harmful if inhaled.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H412 Harmful to aquatic life with long lasting effects.  
H226 Flammable liquid and vapour.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

This safety data sheet has been completely updated in compliance to Regulation 453/2010/EU.

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

Main bibliographic sources:

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  
CCNL - Appendix 1  
Insert further consulted bibliography

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.  
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.   |
| TWATLV:  | Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard). |
| WGK:     | German Water Hazard Class.  |