

Safety data sheet

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 03.10.2016

Product: **DELAN® 500 SC**

Version: 1.0

(ID no. 30131390/SDS_CPA_IL/EN)

Date of print 17.11.2017

1. Identification

Product identifier

DELAN® 500 SC

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

Relevant identified uses: crop protection product, fungicide

Details of the supplier of the safety data sheet

Company:

BASF Agro B.V. Arnhem (NL) Freienbach

Branch

Huobstrasse 3

8808 Pfäffikon SZ

SWITZERLAND

Operating Division Crop Protection

Telephone: +49 621 60-27777

E-mail address: Produktinformation-Pflanzenschutz@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 3 (oral)

Acute Tox. 4 (Inhalation - mist)

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Skin Corr./Irrit. 2
 Skin Sens. 1
 Carc. 2
 Aquatic Acute 1
 Aquatic Chronic 1

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:
 Danger

Hazard Statement:

H315	Causes skin irritation.
H332	Harmful if inhaled.
H301	Toxic if swallowed.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary Statement:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Precautionary Statements (Prevention):

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist or vapour.
P261	Avoid breathing mist.
P264	Wash contaminated body parts thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/clothing/eye protection.

Precautionary Statements (Response):

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P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Precautionary Statements (Storage):

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

According to UN GHS criteria

Hazard determining component(s) for labelling: DITHIANON

Other hazardsAccording to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients**Substances**

Not applicable

MixturesChemical nature

crop protection product, fungicide, suspension concentrate (SC)

Hazardous ingredients (GHS)

According to UN GHS criteria

dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b) (1,4)dithiazine-2,3-dicarbonitrile

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Content (W/W): 42 %	Acute Tox. 2 (Inhalation - dust)
CAS Number: 3347-22-6	Acute Tox. 4 (oral)
EC-Number: 222-098-6	Eye Dam./Irrit. 1
INDEX-Number: 613-021-00-0	Skin Sens. 1A
	Carc. 2
	Aquatic Acute 1
	Aquatic Chronic 1
	H318, H330, H302, H317, H351, H400, H410

sodium alkylnaphthalene sulphonate, formaldehyde condensate

Content (W/W): < 10 %	Eye Dam./Irrit. 2A
	H319

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one

Content (W/W): < 0,05 %	Acute Tox. 4 (oral)
CAS Number: 2634-33-5	Skin Corr./Irrit. 2
EC-Number: 220-120-9	Eye Dam./Irrit. 1
INDEX-Number: 613-088-00-6	Skin Sens. 1
	Aquatic Acute 1
	M-factor acute: 10
	H318, H315, H302, H317, H400

Specific concentration limit:

Skin Sens. 1: >= 0,05 %

Propane-1,2-diol

Content (W/W): < 10 %
CAS Number: 57-55-6
EC-Number: 200-338-0

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Immediately wash thoroughly with soap and water, seek medical attention.

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On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

Special hazards arising from the substance or mixture

carbon monoxide, Carbon dioxide, nitrogen oxides, sulfur oxides

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

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For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Cleaning operations should be carried out only while wearing breathing apparatus.

Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:

Storage duration: 36 Months

Protect from temperatures below: 0 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

No occupational exposure limits known.

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Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	suspension	
Colour:	light brown	
Odour:	faint specific odour	
Odour threshold:	Not determined since harmful by inhalation.	
pH value:	approx. 5 - 7 (1 %(m), approx. 20 °C)	(pH Meter)
Melting point:	approx. 0 °C	
Boiling point:	Information applies to the solvent. approx. 100 °C	
Flash point:	Information applies to the solvent. A flash point determination is unnecessary due to the high water content.	
Evaporation rate:		
Flammability:	not applicable	

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Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Ignition temperature:	> 300 °C The product has not been tested. The statement has been derived from the properties of the individual components.
Vapour pressure:	approx. 23,4 hPa (20 °C) Information applies to the solvent.
Density:	approx. 1,2 g/cm ³ (20 °C)
Relative vapour density (air):	not applicable
Solubility in water:	dispersible
Partitioning coefficient n-octanol/water (log Kow):	not applicable
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	approx. 87 mPa.s (20 °C, 117 1/s) (OECD 114)
Explosion hazard:	Based on the chemical structure there is no indicating of explosive properties.
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.

Other information

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See MSDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:

strong oxidizing agents, strong bases, strong acids

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information**Information on toxicological effects**Acute toxicity

Assessment of acute toxicity:

Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single skin contact. Of high toxicity after single ingestion.

Experimental/calculated data:

LD50 rat (oral): 274 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): 4,089 mg/l 4 h (OECD Guideline 403)

An aerosol was tested.

LD50 rat (dermal): > 2.000 mg/kg (OECD Guideline 402)

No mortality was observed.

Irritation

Assessment of irritating effects:

Skin contact causes irritation. Eye contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation rabbit: moderately irritating (OECD Guideline 404)

Serious eye damage/irritation rabbit: Irritant. (OECD Guideline 405)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Respiratory/Skin sensitization

Assessment of sensitization:
Sensitization after skin contact possible.

Experimental/calculated data:
Guinea pig maximization test guinea pig: Caused skin sensitization in animal studies. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b)(1,4)dithiazine-2,3-dicarbonitrile

Assessment of carcinogenicity:

Long term administration of organotoxic doses revealed a carcinogenic effect. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b)(1,4)dithiazine-2,3-dicarbonitrile

Assessment of repeated dose toxicity:

Repeated exposure may affect certain organs. Damages the kidneys.

Aspiration hazard

The product has not been tested. The statement has been derived from the properties of the individual components.

No aspiration hazard expected.

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

Toxicity to fish:

LC50 (96 h) 0,059 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

Aquatic invertebrates:

EC50 (48 h) 0,29 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Aquatic plants:

EC50 (72 h) 0,724 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

Information on: dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b)(1,4)dithiazine-2,3-dicarbonitrile

Chronic toxicity to fish:

*No observed effect concentration (79 d) 0,0039 mg/l, *Oncorhynchus mykiss* (semistatic)*

Information on: dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b)(1,4)dithiazine-2,3-dicarbonitrile

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Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) 0,060 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

No observed effect concentration (28 d) 0,125 mg/l, Chironomus riparius

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b)(1,4)dithiazine-2,3-dicarbonitrile

Assessment biodegradation and elimination (H₂O):

According to OECD criteria the product is not readily biodegradable but inherently biodegradable.

Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b)(1,4)dithiazine-2,3-dicarbonitrile

Bioaccumulation potential:

Bioconcentration factor: 28 (3 d), Oncorhynchus mykiss (OECD Guideline 305 E)

Does not accumulate in organisms.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dithianon (ISO); 5,10-dihydro-5,10-dioxonaphtho(2,3-b)(1,4)dithiazine-2,3-dicarbonitrile

Assessment transport between environmental compartments:

Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

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Other adverse effects

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport

ADR

UN number	UN2902
UN proper shipping name:	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains DITHIANON)
Transport hazard class(es):	6.1, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	Tunnel code: E

RID

UN number	UN2902
UN proper shipping name:	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains DITHIANON)
Transport hazard class(es):	6.1, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Inland waterway transport

ADN

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UN number	UN2902
UN proper shipping name:	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains DITHIANON)
Transport hazard class(es):	6.1, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number:	UN 2902
UN proper shipping name:	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains DITHIANON)
Transport hazard class(es):	6.1, EHSM
Packing group:	III
Environmental hazards:	yes
	Marine pollutant: YES
Special precautions for user:	None known

Air transport

IATA/ICAO

UN number:	UN 2902
UN proper shipping name:	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains DITHIANON)
Transport hazard class(es):	6.1
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

Transport hazard class(es)

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See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

To avoid risks to man and the environment, comply with the instructions for use.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Skin Sens.	Skin sensitization
Carc.	Carcinogenicity
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Eye Dam./Irrit.	Serious eye damage/eye irritation
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H319	Causes serious eye irritation.

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H315

Causes skin irritation.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.