

# Safety Data Sheet

BASF Safety Data Sheet  
Date / Revised: 26.11.2015  
Product: KINTO® DUO

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(ID no. 30279401/SDS\_CPA\_00/EN; Version: 1.0)

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**KINTO® DUO**

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

Relevant identified uses: Crop protection product, seed treatment fungicide

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

Company:

BASF New Zealand Limited  
Level 4, 4 Leonard Isitt Drive, Auckland Airport, Auckland 2022  
P.O. Box 407, Auckland 1140  
Phone: + 64 9 255 4300  
Fax: + 64 9 255 4307  
E-mail address: reception@basf-nz.co.nz

### 1.4. Emergency telephone number

National Poisons Centre: 0800764 766  
BASF Emergency Advice Number: 0800 944 955 (24 Hour Advice in an Emergency Only)  
BASF Emergency Advice Number: +61 3 8855 6666 (If calling from outside New Zealand)

## 2. Hazards Identification

### 2.1. Classification of the substance or mixture

Hazard classification:  
6.9B, 9.1A

### 2.2. Label elements

Pictogram:



Signal Word: WARNING

Hazard Statements:

H373 Harmful. May cause organ damage through prolonged or repeated oral exposure at high doses  
H410 Very toxic to aquatic organisms with long lasting effects

Precautionary Statements (Prevention)

P102 Keep out of reach of children  
P103 Read label before use  
P260 Do not breathe dust/mist/vapours/spray

Precautionary Statements (Response)

PP314 Get medical advice/attention if you feel unwell  
P391 Collect spillage

### 2.3. Other hazards

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

### 3.1. Substances

Not applicable

### 3.2. Mixtures

#### Chemical nature

Crop protection product, fungicide, product for seed treatment, suspension concentrate (SC)

#### Hazardous ingredients

Prochloraz copper chloride complex

Copper (2+),tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-  
.kappa.O1]-,dichloride

Content (W/W): 5.5 %

CAS Number: 156065-03-1

Acute Tox. 4 (oral)

Aquatic Acute 1

Aquatic Chronic 1

H302, H400, H410

M-factor acute: 10

M-factor chronic: 1

triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-  
methyl)cyclopentanol

Content (W/W): 1.8 %

CAS Number: 131983-72-7

Aquatic Acute 2

Aquatic Chronic 1

H401, H410

Alcohols, C9-11-iso-, C10-rich, ethoxylated

Content (W/W): < 2 %

CAS Number: 78330-20-8

Acute Tox. 5 (oral)

Eye Dam./Irrit. 1

Aquatic Acute 2

H318, H303, H401

Poly(oxy-1,2-ethanediyl), .alpha.-[tris(1- phenylethyl)phenyl]-.omega.-hydroxy-

Content (W/W): < 2 %

CAS Number: 99734-09-5

Aquatic Chronic 3

Aquatic Acute 3

H402, H412

Tridecyl alcohol ethoxylate

Content (W/W): < 2 %

CAS Number: 24938-91-8

Acute Tox. 4 (oral)

Eye Dam./Irrit. 1

Aquatic Chronic 3

H318, H302, H412

Propane-1,2-diol

Content (W/W): < 20 %

CAS Number: 57-55-6

EC-Number: 200-338-0

Kaolin

Content (W/W): < 5 %

CAS Number: 1332-58-7

EC-Number: 310-194-1

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

## 4. First-Aid Measures

### 4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink plenty of water.

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

Symptoms: No significant reaction of the human body to the product known.

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

Treatment: Symptomatic treatment (decontamination, vital functions).

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## 5. Fire-Fighting Measures

### 5.1 Extinguishing media

Suitable extinguishing media:

Water spray, dry powder, foam, carbon dioxide.

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

Carbon monoxide, hydrogen chloride, Carbon dioxide, organochloric compounds, nitrogen oxides  
The substances/groups of substances mentioned can be released in case of fire.

### 5.3 Advice for fire-fighters

Special protective equipment:

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

Further information:

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. Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes.

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## 6. Accidental Release Measures

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

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

### 6.2 Environmental precautions

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

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

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.

Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Dispose of absorbed material in accordance with regulations.

## 6.4 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

### QUALIFICATIONS:

Any person purchasing, handling or disposing of this product must be suitably qualified

### 7.1. 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.

### 7.2. 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: 24 Months

Protect from temperatures below: -10 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 30 °C

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

### AGGREGATE STORAGE VOLUME THRESHOLDS:

When stored with substances of the same hazard the aggregate quantity must be considered. For full details refer to the current standard NZS8409 Management of Agrichemicals or the HSNO Regulations.

Location Certificate*:	Hazardous Atmosphere Zone*:	Fire Extinguishers:	Signage [Hazard Class & Emergency Action]:	Emergency Information:	Emergency Response Plan:	Secondary Containment:
NA	NA	NA	100 litres	1 litre	100 litres	100 litres

\* Note: Farms  $\geq$  4 ha are exempt but with controls.

### DO NOT STORE OR LOAD WITH:

Class 1 Explosive

### SEGREGATE FROM:

Foods and animal feeds

**Segregation:** In store separate by at least 5 metres, on transport separate by at least 3 metres, in both cases horizontally. On vehicles a segregation device may be used: Check the Land Transport Rule Dangerous Goods, Rule 45001 for additional information. Sea transport may require additional segregation. Refer to NZS5433 Sea Segregation for details.

NOTE: Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409.

### 7.3. 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

### 8.1. Control parameters

#### Components with occupational exposure limits

Propane-1,2-diol (57-55-6)

Kaolin (1332-58-7)

### 8.2. Exposure controls

#### Personal protective equipment

Respiratory protection:

Respiratory protection not required.

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) and other.

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.

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## 9. Physical and Chemical Properties

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

Form:	suspension
Colour:	red
Odour:	moderate odour, sweetish
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	approx. 5 - 7 (20 °C) (measured with the undiluted substance)
Crystallization temperature:	-14.1 °C
Boiling range:	approx. 100 °C Information applies to the solvent.
Flash point:	No flash point - Measurement made up to the boiling point.
Evaporation rate:	not applicable
Flammability:	Not flammable.
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:	430 °C (Directive 92/69/EEC, A.15)
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.
Density:	approx. 1.10 g/cm <sup>3</sup> (20 °C) (OECD Guideline 109)
Relative density:	approx. 1.10 (20 °C) (OECD Guideline 109)
Relative vapour density (air):	not applicable
Solubility in water:	dispersible
Partitioning coefficient n-octanol/water (log Kow):	not applicable
Thermal decomposition:	410 °C, > 150 kJ/kg (DSC (OECD 113))
Viscosity, dynamic:	75 mPa.s (20 °C, 100 1/s) (OECD 114)

Explosion hazard: not explosive (Directive 92/69/EEC, A.14)  
Fire promoting properties: not fire-propagating

## 9.2. Other information

Other Information:

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

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## 10. Stability and Reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

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

### 10.3. Possibility of hazardous reactions

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

### 10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

### 10.5. Incompatible materials

Substances to avoid:

Strong acids, strong bases, strong oxidizing agents

### 10.6. Hazardous decomposition products

Hazardous decomposition products:

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

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## 11. Toxicological Information

### 11.1. Information on toxicological effects

#### Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:

LD50 rat (oral): > 2,000 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): > 3.92 mg/l 4 h (OECD Guideline 403)

No mortality was observed. An aerosol was tested.

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

#### Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

#### Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:

Modified Buehler test guinea pig: Skin sensitizing effects were not observed in animal studies. (OECD

Guideline 406)

Mouse Local Lymph Node Assay (LLNA) mouse: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 429)

Germ cell mutagenicity

Assessment of mutagenicity:

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

Carcinogenicity

Assessment of carcinogenicity:

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

*Information on: Copper(2+), tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-.kappa.O1]-, dichloride*

*Assessment of carcinogenicity:*

*The induction of tumors in animal studies was due to a reversible, nongenotoxic effect for which a threshold dose can be derived. A carcinogenic potential can essentially be excluded after a single or short-term exposure to the substance at low concentrations.*

Reproductive toxicity

Assessment of reproduction toxicity:

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

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.

*Information on: triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-methyl)cyclopentanol*

*Assessment of teratogenicity:*

*The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.*

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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: ammonia*

*Information on: Copper(2+), tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-.kappa.O1]-, dichloride*

*Assessment of repeated dose toxicity:*

*Adaptive effects were observed after repeated exposure in animal studies.*

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Other relevant toxicity information

Misuse can be harmful to health.

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## 12. Ecological Information

### 12.1. Toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Copper(2+), tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-.kappa.O1]-, dichloride

Toxicity to fish:

LC50 (96 h) 1.35 mg/l, *Cyprinus carpio* (OECD 203; ISO 7346; 84/449/EEC, C.1, static)

Information on: triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-methyl)cyclopentanol

Toxicity to fish:

LC50 (96 h) > 3.6 mg/l, *Oncorhynchus mykiss* (EPA 72-1, Flow through.)

No observed effect concentration (28 d) 0.01 mg/l, *Oncorhynchus mykiss* (EPA 72-1, Flow through.)

Information on: Copper(2+), tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-.kappa.O1]-, dichloride

Aquatic invertebrates:

LC50 (48 h) 0.468 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Information on: triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-methyl)cyclopentanol

Aquatic invertebrates:

EC50 (96 h) 1.7 mg/l, *Mysidopsis bahia* (static)

No observed effect concentration (28 d) 0.041 mg/l, *Mysidopsis bahia*

Information on: Copper(2+), tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-.kappa.O1]-, dichloride

Aquatic plants:

EC50 (72 h) 0.024 mg/l (biomass), *Scenedesmus subspicatus* (OECD Guideline 201, static)

Information on: triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-methyl)cyclopentanol

Aquatic plants:

EC50 (120 h) 0.31 mg/l, *Skeletonema costatum*

No observed effect concentration (120 h) 0.031 mg/l, *Skeletonema costatum*

## 12.2. Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

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

Information on: triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-methyl)cyclopentanol

Assessment biodegradation and elimination (H<sub>2</sub>O):

Not readily biodegradable (by OECD criteria).

Information on: Copper(2+), tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-.kappa.O1]-, dichloride

Assessment biodegradation and elimination (H<sub>2</sub>O):

Not readily biodegradable (by OECD criteria).

## 12.3. 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: triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-methyl)cyclopentanol

Bioaccumulation potential:

Bioconcentration factor: 72.55 (42 d), *Lepomis macrochirus*

Does not accumulate in organisms.

Information on: Copper(2+), tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-



*carboxamide-.kappa.O1]-,dichloride*

*Bioaccumulation potential:*

*Bioconcentration factor: 200, Oncorhynchus mykiss*

*Accumulation in organisms is not to be expected. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.*

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#### 12.4. Mobility in soil

Assessment transport between environmental compartments:

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

*Information on: Copper(2+),tetrakis[N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide-.kappa.O1]-,dichloride*

*Assessment transport between environmental compartments:*

*Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.*

*Information on: triticonazole (ISO); (RS)-(E)-5-(4-chlorobenzylidene)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-methyl)cyclopentanol*

*Assessment transport between environmental compartments:*

*Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.*

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#### 12.5. 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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#### 12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

#### 12.7. Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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### 13. Disposal Considerations

To avoid disposal all attempts should be made to use this product completely, in accordance with its registered use. If this is not possible handle with care and dispose of in a safe manner. Follow all applicable community, regional and national regulations regarding waste management methods.

#### 13.1. Waste treatment methods

Container:

Triple rinse empty container and add residue to the spray tank. Recycle through Agrecovery (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)). DO NOT REUSE empty container.

Product:

Dispose of this product only by using according to the label or at an approved landfill. Do NOT burn product. For information on disposal of unused, unwanted product, contact the local council.

Do NOT contaminate surface or ground water with bait or used container.

## 14. Transport Information

Commercial transport:

Classified as Dangerous Goods for Land/rail (ADR/RID), sea (IMDG/GGVSee) and air transport (ICAO/IATA):

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PROCHLORAZ COPPER CHLORIDE, TRITICONAZOLE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Marine pollutant:	yes

### 14.1. UN number

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

### 14.2. UN proper shipping name

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

### 14.3. Transport hazard class(es)

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

### 14.4. Packing group

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

### 14.5. Environmental hazards

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

### 14.6. Special precautions for user

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

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

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## 15. Regulatory Information

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

For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)

#### NZ Regulations

Approved pursuant to the HSNO Act 1996, Code HSR100485.  
See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.

Registered pursuant to the ACVM Act 1997, No. P8307.  
See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

## 15.2 Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

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## 16. Other Information

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

Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
H302	Harmful if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H401	Toxic to aquatic life.
H318	Causes serious eye damage.
H303	May be harmful if swallowed.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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