

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

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

#### 1.1 Product identifier

Trade name : SUBDUE

**Design code** : A13947A

Product Registration number : MAPP 12503

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

Use of the Sub-stance/Mixture : Fungicide

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

Company : Syngenta UK Limited  
CPC4, Capital Park  
Fulbourn, Cambridge CB21 5XE  
United Kingdom

Telephone : +44 (0) 1223 883400

Telefax : +44 (0) 1223 882195

E-mail address of person responsible for the SDS : customer.services@syngenta.com

#### 1.4 Emergency telephone number

**Emergency telephone number** : +44 1484 538444

---

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification (**REGULATION (EC) No 1272/2008**)

Acute toxicity, Category 4

H302: Harmful if swallowed.

Eye irritation, Category 2

H319: Causes serious eye irritation.

Chronic aquatic toxicity, Category 3

H412: Harmful to aquatic life with long lasting effects.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements : P102 Keep out of reach of children.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P391 Collect spillage.

#### Prevention:

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

#### Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

#### Disposal:

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

Chemical name	CAS-No. EC-No.	Classification	Concentration (% w/w)
---------------	-------------------	----------------	--------------------------

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

	Index-No. Registration number		
metalaxyl-M (ISO)	70630-17-0 612-163-00-0	Acute Tox. 4; H302 Eye Dam. 1; H318	$\geq 30 - < 50$
acetophenone	98-86-2 202-708-7 606-042-00-1 01-2119533169-37	Acute Tox. 4; H302 Eye Irrit. 2; H319	$\geq 10 - < 20$
heptan-2-one	110-43-0 203-767-1 606-024-00-3	Flam. Liq. 3; H226 Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 STOT SE 3; H336 STOT SE 3; H335	$\geq 1 - < 10$
amines, tallow alkyl, ethoxylated	61791-26-2 500-153-8	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 2; H411	$\geq 1 - < 2.5$
dodecylbenzene sulphonic acid	85536-14-7 287-494-3	Acute Tox. 4; H302 Skin Corr. 1C; H314 Aquatic Chronic 2; H411	$\geq 1 - < 2.5$

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

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

Symptoms : Nonspecific  
No symptoms known or expected.

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

Treatment : There is no specific antidote available.  
Treat symptomatically.

---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

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

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

Specific hazards during fire-fighting : 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.  
Flash back possible over considerable distance.

### 5.3 Advice for firefighters

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

Further information : Do not allow run-off from fire fighting to enter drains or water courses.  
Cool closed containers exposed to fire with water spray.

---

## SECTION 6: Accidental release measures

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

Personal precautions : Refer to protective measures listed in sections 7 and 8.

### 6.2 Environmental precautions

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.

---

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

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

Methods for 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.

### 6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : 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.

Further information on storage stability : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

### 7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
metalaxyl-M (ISO)	70630-17-0	TWA	5 mg/m <sup>3</sup>	Syngenta
propane-1,2-diol	57-55-6	TWA (particles)	10 mg/m <sup>3</sup>	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
	57-55-6	TWA (Total vapour and particles)	150 ppm 474 mg/m <sup>3</sup>	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the			

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

	long-term exposure should be used			
heptan-2-one	110-43-0	TWA	50 ppm 238 mg/m <sup>3</sup>	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
	110-43-0	STEL	100 ppm 475 mg/m <sup>3</sup>	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
	110-43-0	TWA	50 ppm 237 mg/m <sup>3</sup>	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
	110-43-0	STEL	100 ppm 475 mg/m <sup>3</sup>	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

### 8.2 Exposure controls

#### Engineering measures

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

Eye protection : Tightly fitting safety goggles  
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.  
  
Use eye protection according to EN 166.

Hand protection  
Remarks : No special protective equipment required.

Skin and body protection : No special protective equipment required.  
Select skin and body protection based on the physical job requirements.

Respiratory protection : No personal respiratory protective equipment normally required.  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

### SECTION 9: Physical and chemical properties

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

##### Appearance

: liquid

Colour : yellow to orange

Odour : like ketone

Odour Threshold : No data available

pH : 6 - 10  
Concentration: 1 % w/v

**Melting point/range** : No data available

**Boiling point/boiling range** : No data available

Flash point : 80 °C(1023 hPa)

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 : 1.06 g/cm<sup>3</sup> (20 °C)

##### Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : 385 °C

Decomposition temperature : No data available

##### Viscosity

Viscosity, dynamic : 21.0 mPa.s (40 °C)

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

### 9.2 Other information

Surface tension : 35.1 mN/m, 20 °C

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None reasonably foreseeable.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

### 10.5 Incompatible materials

Materials to avoid : None known.

### 10.6 Hazardous decomposition products

Hazardous decomposition products : No hazardous decomposition products are known.

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure :  
Ingestion  
Inhalation  
Skin contact  
Eye contact

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat, female): 550 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.58 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): > 2,000 mg/kg

---



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

Assessment: The substance or mixture has no acute dermal toxicity

### Components:

#### **metalaxyl-M (ISO):**

Acute oral toxicity

: LD50 (Rat, male): 953 mg/kg

LD50 (Rat, female): 375 mg/kg

Acute inhalation toxicity

: LC50 (Rat, male and female): > 2.29 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Remarks: Highest attainable concentration

Acute dermal toxicity

: LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity

#### **acetophenone:**

Acute oral toxicity

: LD50 (Rat): 2,081 mg/kg

Assessment: The component/mixture is moderately toxic after single ingestion.

#### **heptan-2-one:**

Acute oral toxicity

: LD50 (Rat): 1,600 mg/kg

Acute inhalation toxicity

: LC50 (Rat): 2,000 - 4,000 mg/l

Exposure time: 4 h

Test atmosphere: gas

Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity

: LD50 (Rabbit): 10,000 mg/kg

#### **amines, tallow alkyl, ethoxylated:**

Acute oral toxicity

: Assessment: The component/mixture is moderately toxic after single ingestion.

#### **dodecylbenzene sulphonic acid:**

Acute oral toxicity

: LD50 (Rat, male and female): 1,470 mg/kg

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version  
5.0

Revision Date:  
13.11.2017

SDS Number:  
S1149441794

This version replaces all previous versions.

---

### Skin corrosion/irritation

#### Product:

Species: Rabbit

Result: No skin irritation

#### Components:

##### **metalaxyl-M (ISO):**

Species: Rabbit

Result: No skin irritation

##### **heptan-2-one:**

Species: Rabbit

Result: Irritating to skin.

##### **dodecylbenzene sulphonic acid:**

Species: Rabbit

Result: Corrosive after 1 to 4 hours of exposure

### Serious eye damage/eye irritation

#### Product:

Species: Rabbit

Result: Irritation to eyes, reversing within 21 days

#### Components:

##### **metalaxyl-M (ISO):**

Species: Rabbit

Result: Risk of serious damage to eyes.

##### **acetophenone:**

Result: Eye irritation

##### **amines, tallow alkyl, ethoxylated:**

Result: Risk of serious damage to eyes.

### Respiratory or skin sensitisation

#### Product:

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

#### Components:

##### **metalaxyl-M (ISO):**

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

### Germ cell mutagenicity

#### Components:

#### metalaxyl-M (ISO):

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

#### dodecylbenzene sulphonic acid:

Germ cell mutagenicity- Assessment : In vitro tests did not show mutagenic effects

### Carcinogenicity

#### Components:

#### metalaxyl-M (ISO):

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

### Reproductive toxicity

#### Components:

#### metalaxyl-M (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

### STOT - single exposure

#### Components:

#### heptan-2-one:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

### STOT - repeated exposure

#### Components:

#### metalaxyl-M (ISO):

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

---

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 15 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 61 mg/l  
Exposure time: 48 h

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 39 mg/l  
Exposure time: 72 h

### Components:

#### **metalaxyl-M (ISO):**

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 271 mg/l  
Exposure time: 96 h  
  
NOEC (Pseudokirchneriella subcapitata (green algae)): 19.7 mg/l  
End point: Growth rate  
Exposure time: 96 h

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 50 mg/l  
Exposure time: 28 d  
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 25 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

#### **acetophenone:**

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 86.4 mg/l  
Exposure time: 72 h

### **Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

#### **heptan-2-one:**

### **Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

#### **amines, tallow alkyl, ethoxylated:**

### **Ecotoxicology Assessment**

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

### dodecylbenzene sulphonic acid:

Toxicity to fish

: LC50 (Fish): 1.67 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.9 mg/l  
Exposure time: 48 h

Toxicity to algae : EbC50 (green algae): 29 mg/l  
End point: Biomass  
Exposure time: 96 h

NOEC (green algae): 0.58 mg/l  
End point: Biomass  
Exposure time: 96 h

Toxicity to fish (Chronic toxicity) : NOEC: 0.63 mg/l  
Exposure time: 196 d  
Species: Fish

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1.41 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

## 12.2 Persistence and degradability

### Components:

#### metalaxyl-M (ISO):

Biodegradability

: Result: Not readily biodegradable.

Stability in water

: Degradation half life: 22.4 - 47.5 d  
Remarks: Product is not persistent.

#### acetophenone:

Biodegradability

: Result: Readily biodegradable.

## 12.3 Bioaccumulative potential

### Components:

#### metalaxyl-M (ISO):

Bioaccumulation

: Remarks: Low bioaccumulation potential.

Partition coefficient: n-octanol/water

: log Pow: 1.71 (25 °C)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

### 12.4 Mobility in soil

#### Components:

##### **metalaxyl-M (ISO):**

Distribution among environmental compartments : Remarks: Metalaxyl has a range from low to very high mobility in soil depending on soil type.

Stability in soil : Dissipation time: < 50 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

### 12.5 Results of PBT and vPvB assessment

#### Product:

##### Assessment

: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

#### Components:

##### **metalaxyl-M (ISO):**

##### 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)..

##### **acetophenone:**

##### 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)..

##### **dodecylbenzene sulphonic acid:**

##### 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)..

### 12.6 Other adverse effects

No data available

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

local regulations.

Contaminated packaging : Empty remaining contents.  
Triple rinse containers.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

Waste Code : uncleaned packagings  
150110, packaging containing residues of or contaminated by dangerous substances

---

### SECTION 14: Transport information

#### 14.1 UN number

Not regulated as a dangerous good

#### 14.2 UN proper shipping name

Not regulated as a dangerous good

#### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

#### 14.4 Packing group

Not regulated as a dangerous good

#### 14.5 Environmental hazards

Not regulated as a dangerous good

#### 14.6 Special precautions for user

Not applicable

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

---

### SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

#### Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Use plant protection products safely. Always read the label and product information before use.

---

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

---

### SECTION 16: Other information

#### Full text of H-Statements

H226 : Flammable liquid and vapour.  
H302 : Harmful if swallowed.  
H314 : Causes severe skin burns and eye damage.  
H315 : Causes skin irritation.  
H318 : Causes serious eye damage.  
H319 : Causes serious eye irritation.  
H332 : Harmful if inhaled.  
H335 : May cause respiratory irritation.  
H336 : May cause drowsiness or dizziness.  
H411 : Toxic to aquatic life with long lasting effects.

#### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Aquatic Chronic : Chronic aquatic toxicity  
Eye Dam. : Serious eye damage  
Eye Irrit. : Eye irritation  
Flam. Liq. : Flammable liquids  
Skin Corr. : Skin corrosion  
Skin Irrit. : Skin irritation  
STOT SE : Specific target organ toxicity - single exposure  
2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values  
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits  
2000/39/EC / TWA : Limit Value - eight hours  
2000/39/EC / STEL : Short term exposure limit  
GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)  
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Mari-



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## SUBDUE

Version 5.0      Revision Date: 13.11.2017      SDS Number: S1149441794      This version replaces all previous versions.

---

time Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

#### Classification of the mixture:

Acute Tox. 4	H302
Eye Irrit. 2	H319
Aquatic Chronic 3	H412

#### Classification procedure:

Based on product data or assessment
Based on product data or assessment
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GB / EN