



# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) Annex II

## Optimus

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Version 3

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## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

## Optimus

Pure substance/mixture

Mixture

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

Recommended Use

Growth regulator

Uses advised against

No information available

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

Supplier Address

ADAMA Agricultural Solutions UK Ltd  
Unit 15, Thatcham Buisness Village Colthrop Way,  
Thatcham Berkshire RG19 4LW, UK : 01635 860555  
Fax: 01635 861555

For further information, please contact

Email address

ukenquiries@adama.com

### 1.4. Emergency telephone number

Emergency Telephone

National Chemical Emergency Centre (UK):  
Tel: 01865 407333 (24 hours)

## Section 2: HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation Category 2 - (H315)

Serious eye damage/eye irritation Category 2 - (H319)

Skin sensitization Category 1 - (H317)

Hazardous to the Aquatic Category 3 - (H412)

Environment - Chronic Hazard

### 2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



<b>Signal word</b>	Warning
<b>Hazard Statements</b>	H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H412 - Harmful to aquatic life with long lasting effects
<b>Precautionary Statements</b>	P102 - Keep out of reach of children P280 - Wear protective gloves/protective clothing/eye protection/face protection P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P501 - Dispose of contents/ container to an approved waste disposal plant
<b>EU Specific Hazard Statements</b>	EUH401 - To avoid risks to human health and the environment, comply with the instructions for use
<b>Additional phrases for PPP</b>	SP1 - Do not contaminate water with the product or its container
<b>2.3. Other hazards</b>	No information available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixture

Chemical Name	Weight-%	CAS No	EC No	Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	M-Factor	REACH Registration Number
Trinexapac-ethyl	15-19	95266-40-3	-	-	Aquatic Chronic 2 (H411)		-
Propylene carbonate	7-12	108-32-7	203-572-1	607-194-00-1	Eye Irrit. 2 (H319)		01-211953723 2-48-0001
Dodecylbenzene Sulphonic Acid - Isopropylamine Salt	9-12	26264-05-1	247-556-2	-	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)		-
A fatty alcohol polyglycol ether	16-20	9043-30-5	500-027-2	-	Eye Dam. 1 (H318) Acute Tox. 4 (H302)		-

Full text of H- and EUH-phrases: see section 16

### Section 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

<b>General advice</b>	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!.
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<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
<b>Ingestion</b>	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.

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

**Symptoms** None known

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

**Note to physicians** Treat symptomatically.

### **Section 5: FIRE-FIGHTING MEASURES**

#### **5.1. Extinguishing media**

##### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### **Unsuitable Extinguishing Media**

No information available.

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

No specific hazard known.

#### **5.3. Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus  
In the event of fire and/or explosion do not breathe fumes.

### **Section 6: ACCIDENTAL RELEASE MEASURES**

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

##### **Personal precautions**

Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

##### **For emergency responders**

Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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

**Methods for cleaning up**

Take up mechanically, placing in appropriate containers for disposal.

**6.4. Reference to other sections****Other Information**

See also section 8,13

**Section 7: HANDLING AND STORAGE****7.1. Precautions for safe handling****Advice on safe handling**

Use only with adequate ventilation. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

**General Hygiene Considerations**

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

**7.2. Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

**7.3. Specific end use(s)****Risk Management Methods (RMM)**

The information required is contained in this Material Safety Data Sheet.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****8.2. Exposure controls****Engineering Controls**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment****Eye/face protection**

Tight sealing safety goggles.

**Body Protection**

Suitable protective clothing, Apron, Gloves made of plastic or rubber.

**General Hygiene Considerations**

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

**Environmental exposure controls**

Do not allow into any sewer, on the ground or into any body of water.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
<b>Appearance</b>			
Physical state	: Liquid		
Color	: yellow - brown		
Odor	: characteristic		
Odor threshold	: No data available		

<b>pH</b>	: 3.2 - 4.2	CIPAC MT 75.3	solution (1 %)
<b>Melting point/freezing point °C</b>	: ----		Not Applicable
<b>Boiling point/boiling range °C</b>	: No data available		
<b>Flash point °C</b>	: 137	CIPAC MT 12	
<b>Evaporation rate</b>	: ----		No data available
<b>Flammability (solid, gas)</b>	: Not applicable for liquids		
<b>Upper/lower flammability or explosive limits</b>	: No data available		
<b>Vapor pressure kPa</b>	: ----		Not Applicable
<b>Vapor density</b>	: No data available		
<b>Relative density</b>	: 0.96 - 1.06	CIPAC MT 3.1	
<b>Solubility(ies) mg/l</b>	: ----		Not Applicable
<b>Partition Coefficient (n-octanol/water) Log Pow</b>	:		See Section 12 for more information
<b>Autoignition temperature °C</b>	: 374	EEC A.15	
<b>Decomposition temperature °C</b>	: No data available		
<b>Kinematic viscosity mm<sup>2</sup>/s 40 °C</b>	: 24.7		
<b>Explosive properties</b>	: Not an explosive	EEC A.14	
<b>Oxidizing properties</b>	: Not oxidizing	EEC A.21	
<b>9.2. Other information</b>			
<b>Bulk density g/ml</b>	: ----		Not Applicable
<b>Surface tension mN/m</b>	: ----		No data available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None under normal processing.

### 10.4. Conditions to avoid

Heat, flames and sparks.

### 10.5. Incompatible materials

No information available

### 10.6. Hazardous decomposition products

None under normal use conditions.

## Section 11: TOXICOLOGY INFORMATION

### 11.1. Information on toxicological effects

#### Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: > 2000	Rat	OECD 423	
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	
Inhalation LC50 mg/l/4h	:			No data available

<b>Skin corrosion/irritation</b>	: Non-irritating to the skin	Rabbit	OECD 404
<b>Serious eye damage/eye irritation</b>	: Irritating to eyes	Rabbit	OECD 405
<b>Respiratory/skin sensitization</b>	: Skin sensitizer	Guinea pig	OECD 406

**Chronic toxicity****Germ cell mutagenicity**

**Chemical Name**  
Trinexapac-ethyl : Not classified

**Carcinogenicity**

**Chemical Name**  
Trinexapac-ethyl : Not Carcinogenic

**Reproductive toxicity**

**Chemical Name**  
Trinexapac-ethyl : Not toxic for the reproductive system

**STOT - single exposure**

**Chemical Name**  
Trinexapac-ethyl : No data available

**STOT - repeated exposure**

**Chemical Name**  
Trinexapac-ethyl : No data available

**Aspiration hazard**

**Chemical Name**  
Trinexapac-ethyl : No data available

**Section 12: ECOLOGICAL INFORMATION****12.1. Toxicity****Aquatic toxicity**

<b>Acute toxicity</b>	<b>Values</b>	<b>Species</b>	<b>Method</b>	<b>Remarks</b>
<b>Fish 96-hour LC50 mg/l</b>	: 24	Oncorhynchus mykiss	OECD 203	
<b>Crustacea 48-hour EC50 mg/l</b>	: 15	Daphnia magna	OECD 202	
<b>Algae 72-hour EC50 mg/l</b>	: 93	Anabaena flos-aquae	OECD 201	Growth rate
<b>Other plants EC50 mg/l</b>	: 78	Lemna gibba	OECD 221	7 days

**Terrestrial Toxicity**

**Birds Oral LD50 mg/kg**  
**Chemical Name**  
Trinexapac-ethyl : > 2000 Mallard duck EPA-FIFRA 71-1

**Bees Oral LD50 µg/bee**

**Chemical Name**  
Trinexapac-ethyl : > 83 OECD 213, 214

**12.2. Persistence and degradability**

<b>Abiotic Degradation</b>	<b>Values</b>	<b>Method</b>	<b>Remarks</b>
<b>Water DT50 days</b> <b>Chemical Name</b> Trinexapac-ethyl	: 4.2		

**Soil DT50 days**

**Chemical Name**

Trinexapac-ethyl : 1

**Biodegradation****Chemical Name**

Trinexapac-ethyl : Not readily biodegradable

**12.3. Bioaccumulative potential****Partition Coefficient  
(n-octanol/water) Log Pow****Chemical Name**

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Trinexapac-ethyl	: -0.27	OECD 107, 117	pH 7

**Bioconcentration factor (BCF)****Chemical Name**

Trinexapac-ethyl : 6

**12.4. Mobility in soil****Adsorption/Desorption****Chemical Name**

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Trinexapac-ethyl	: ----		No data available

**12.5. Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB

**12.6. Other adverse effects**

No information available.

**Section 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods****Waste from residues/unused products**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Improper disposal or reuse of this container may be dangerous and illegal.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used.

**Section 14: TRANSPORTATION INFORMATION****IMDG/IMO**

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated ( )
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine pollutant	Not regulated
14.6 Special precautions for user	

**RID/ADR**

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated ( )
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not regulated
14.6 Special precautions for user	

**ICAO/IATA**

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated ( )
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not regulated
14.6 Special precautions for user	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Applicable

**Section 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.2. Chemical safety assessment**

A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required. A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009.

**Section 16: OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H319 - Causes serious eye irritation  
H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H411 - Toxic to aquatic life with long lasting effects

**Revision Note** \*\*\* - Change from previous version.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided in this Material 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.

End of Safety Data Sheet