



EC safety data sheet

Trade name: MODAN 250 SC

Current version : 1.0.0, issued: 17.11.2015

Replaced version: -, issued: -

Region: GB

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

1.1 Product identifier

Trade name

MODAN 250 SC

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

Relevant identified uses of the substance or mixture

growth regulator

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

HELM AG

Nordkanalstraße 28

D-20097 Hamburg

Telephone no. +49(0)40 / 2375-0

Fax no. +49(0)40 / 2375-1845

Information provided by / telephone

Telephone: +49(0)40 / 23750 Fax: +49(0)40 / 23751845

Advice on Safety Data Sheet

SDB@HELMAG.COM

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

In case of transport incidents and other emergencies (advice in German and English):

+44 (0) 1235 239 670 (NCEC, National Chemical Emergency Centre)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Aquatic Chronic 2; H411

Eye Dam. 1; H318

Skin Sens. 1; H317

STOT SE 3; H335

Classification information

Classification and labelling are based on toxicological studies performed on the product (mixture).

Classification and labelling with respect to water pollution risks are based on ecotoxicological studies performed on the product (mixture).

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Hazard pictograms



GHS05



GHS07



GHS09

Signal word

Danger

Hazard statements

H317

May cause an allergic skin reaction.

H318

Causes serious eye damage.

H335

May cause respiratory irritation.

H411

Toxic to aquatic life with long lasting effects.



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Hazard statements (EU)

EUH210 Safety data sheet available on request.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P261 Avoid breathing vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local and national regulations.

2.3 Other hazards

PBT assessment
No data available.
vPvB assessment
No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Hazardous ingredients

No	Substance name	Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration %
1	Trinexapac-ethyl		
	95266-40-3	Aquatic Chronic 2; H411	>= 25.00 - < 50.00 %-b.w.
	-		
	-		
2	Calcium-dodecylbenzenesulphonate		
	26264-06-2	Eye Dam. 1; H318	< 5.00 %-b.w.
	247-557-8	Skin Irrit. 2; H315	
	-		
	-		
3	butan-1-ol		
	71-36-3	Acute Tox. 4; H302	< 2.50 %-b.w.
	200-751-6	Eye Dam. 1; H318	
	603-004-00-6	Flam. Liq. 3; H226	
	01-2119484630-38	Skin Irrit. 2; H315	
		STOT SE 3; H335	
		STOT SE 3; H336	

Full Text for all H-phrases and EUH-phrases: pls. see section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. If the patient is likely to become unconscious, place and transport in stable sideways position.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air. Irregular breathing/no breathing: artificial respiration. Call a doctor immediately.

After skin contact

Wash off immediately with soap and water. Don't use solvents. Consult a doctor if skin irritation persists.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical assistance.

After ingestion

Do not induce vomiting. Call a doctor immediately and show label or packaging. Never give anything by mouth to an unconscious person.



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4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam; Extinguishing powder; Water spray jet; Carbon dioxide

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO); Combustion products of this material have to be classed invariably as respiratory poison.

5.3 Advice for firefighters

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus. Wear protective clothing. Cool endangered containers with water spray jet. Suppress gases/vapours/mists with water spray jet. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Keep away sources of ignition.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g., sand, kieselguhr, universal binder). Send in suitable containers for recovery or disposal.

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation, if necessary). Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far as possible by the state of the art.

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from food, drink and animal feeding stuffs. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Do not inhale vapours. Wash hands before breaks and after work. Provide eye wash fountain in work area.

Advice on protection against fire and explosion

Vapours can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of heat and ignition. Use explosion-proof equipment/fittings and non-sparking tools.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

Recommended storage temperature

Value 5 - 35 °C

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original one.

Advice on storage assembly

Do not store together with: Oxidizing agents



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7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	butan-1-ol	71-36-3	200-751-6
List of approved workplace exposure limits (WELs) / EH40			
Butan-1-ol			
	STEL	154	mg/m ³ 50 ml/m ³
	Skin resorption / sensibilisation	Sk	

DNEL and PNEC values

DNEL values (worker)

No	Substance name	Route of exposure	Exposure time	Effect	CAS / EC no
1	butan-1-ol				71-36-3 200-751-6
	inhalative	Long term (chronic)		local	310 mg/m ³

DNEL value (consumer)

No	Substance name	Route of exposure	Exposure time	Effect	CAS / EC no
1	butan-1-ol				71-36-3 200-751-6
	oral	Long term (chronic)		systemic	3.125 mg/kg/day
	inhalative	Long term (chronic)		local	55 mg/m ³

PNEC values

No	Substance name	ecological compartment	Type	CAS / EC no
1	butan-1-ol			71-36-3 200-751-6
	water	fresh water		0.082 mg/l
	water	marine water		0.0082 mg/l
	water	Aqua intermittent		2.25 mg/l
	water	fresh water sediment		0.178 mg/kg
	with reference to: dry weight			
	water	marine water sediment		0.0178 mg/kg
	with reference to: dry weight			
	soil	-		0.015 mg/kg
	with reference to: dry weight			
	sewage treatment plant	-		2476 mg/l

8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection

Safety glasses with side protection shield (EN 166)

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other

Normal chemical work clothing.



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Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour	
liquid	
yellow	
Odour	
characteristic	
Odour threshold	
No data available	
pH value	
Value	appr. 4.1
Method	CIPAC MT 75.3
Boiling point / boiling range	
No data available	
Melting point / melting range	
No data available	
Decomposition point / decomposition range	
No data available	
Flash point	
Value	125 °C
Auto-ignition temperature	
Value	260 °C
Method	440/2008/EEC A.15.
Oxidising properties	
no	
Explosive properties	
no	
Flammability (solid, gas)	
No data available	
Lower flammability or explosive limits	
No data available	
Upper flammability or explosive limits	
No data available	
Vapour pressure	
No data available	
Vapour density	
No data available	
Evaporation rate	
No data available	
Relative density	
No data available	
Density	
Value	0.989 g/cm ³
Reference temperature	20 °C
Solubility in water	
Remarks	emulsifiable



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Solubility(ies)	
No data available	

Partition coefficient: n-octanol/water			
No	Substance name	CAS no.	EC no.
1	Trinexapac-ethyl	95266-40-3	-
log Pow		-0.29	
Reference temperature		25	°C
Method		OECD 117	
Source		EFSA	

Viscosity	
No data available	

9.2 Other information

Other information	
No data available.	

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

None, if handled according to intended use.

10.5 Incompatible materials

Oxidizing agents

10.6 Hazardous decomposition products

None, if handled according to intended use.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity			
No	Product Name		
1	MODAN 250 SC		
LD50	>	2000	mg/kg
Species	rat		
Method	OECD 423		

Acute dermal toxicity			
No	Product Name		
1	MODAN 250 SC		
LD50	>	2000	mg/kg
Species	rat		
Method	OECD 402		

Acute inhalational toxicity			
No	Product Name		
1	MODAN 250 SC		
LC50	>	5.05	mg/l
Duration of exposure		4	h
State of aggregation	Dust/mist		
Species	rat		
Method	OECD 403		
Remarks	Aerosol		



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Skin corrosion/irritation	
No	Product Name
1	MODAN 250 SC
Method	OECD 404
Evaluation	non-irritant

Serious eye damage/irritation	
No	Product Name
1	MODAN 250 SC
Method	OECD 405
Evaluation	irritant - risk of strong eye injuries

Respiratory or skin sensitisation	
No	Product Name
1	MODAN 250 SC
Route of exposure	Skin
Method	OECD 429
Evaluation	slightly sensitizing

Germ cell mutagenicity	
No	Product Name
1	MODAN 250 SC
Type of examination	Bacterial Reverse Mutation Test
Species	Salmonella typhimurium TA98, TA100, TA102, TA1535, TA1537
Method	OECD 471
Evaluation/classification	Based on available data, the classification criteria are not met.

Reproduction toxicity	
No data available	

Carcinogenicity	
No data available	

STOT-single exposure	
No	Product Name
1	MODAN 250 SC
inhalation	
Species	rat
Method	OECD 403
Remarks	May cause respiratory irritation.

STOT-repeated exposure	
No data available	

Aspiration hazard	
No data available	

Delayed and immediate effects as well as chronic effects from short and long-term exposure	
Inhalation of vapours may lead to headache, drowsiness and dizziness. Repeated and prolonged skin contact may cause removal of natural fat from the skin and irritation of the skin.	

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)			
No	Product Name		
1	MODAN 250 SC		
LC50		21	mg/l
Duration of exposure		96	h
Species	Oncorhynchus mykiss		
Method	OECD 203		



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Toxicity to fish (chronic)	
No data available	

Toxicity to Daphnia (acute)	
No	Product Name
1	MODAN 250 SC
EC50	36.2 mg/l
Duration of exposure	48 h
Species	Daphnia magna
Method	OECD 202

Toxicity to Daphnia (chronic)	
No data available	

Toxicity to algae (acute)	
No	Product Name
1	MODAN 250 SC
ErC50	9.43 mg/l
Duration of exposure	72 h
Species	Navicula pelliculosa
Method	OECD 201

Toxicity to algae (chronic)	
No data available	

Bacteria toxicity	
No data available	

12.2 Persistence and degradability

Biodegradability			
No	Substance name	CAS no.	EC no.
1	Trinexapac-ethyl	95266-40-3	-
Source	EFSA		
Evaluation	not readily biodegradable		

12.3 Bioaccumulative potential

Bioconcentration factor (BCF)			
No	Substance name	CAS no.	EC no.
1	Trinexapac-ethyl	95266-40-3	-
BCF	6		
Species	Lepomis macrochirus		
Source	EFSA		

Partition coefficient: n-octanol/water			
No	Substance name	CAS no.	EC no.
1	Trinexapac-ethyl	95266-40-3	-
log Pow	-0.29		
Reference temperature	25 °C		
Method	OECD 117		
Source	EFSA		

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	No data available.
vPvB assessment	No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

Other information	
Do not discharge into the drains or waters and do not store on public depositories.	



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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	9
Classification code	M6
Packing group	III
Hazard identification no.	90
UN number	UN3082
Technical name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Danger releasing substance	Trinexapac-ethyl
Tunnel restriction code	E
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2 Transport IMDG

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Danger releasing substance	Trinexapac-ethyl
EmS	F-A+S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

14.3 Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Danger releasing substance	Trinexapac-ethyl
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

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

Not relevant



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SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This product is subject to Part I of Annex I, risk category: E2

15.2 Chemical safety assessment

For this mixture a chemical safety assessment has not been carried out.

SECTION 16: Other information

Further information

ID 666173

Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EU

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.

Department issuing safety data sheet

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This information is based on our present state of knowledge and experience.

The security data sheet describes products with a view to the security requirements.

However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.

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