

Safety Data Sheet

TourTurf STA Sports Turf Acidifier

Replaces date: 02/12/2022

Revision date: 12/02/2025

Version: 2.2.0

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

1.1. Product identifier

Trade name: TourTurf STA Sports Turf Acidifier
UFI: C300-W0XH-M00G-GKJK

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

Recommended uses: Fertiliser.

1.3. Details of the supplier of the safety data sheet

Supplier

Company: E. Marker
Address: Okslundvej 8, Bov
Zip code: 6330
City: Padborg
Country: DENMARK
Email: info@emarker.dk
Phone: + 45 74 67 08 08
Homepage: www.emarker.dk

1.4. Emergency Telephone Number

Members of the public: 111 (NHS 111 (Scotland: NHS 24)).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: Skin Irrit. 2;H315
Skin Sens. 1A;H317
Eye Dam. 1;H318
STOT SE 3;H335

Most serious harmful effects: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.

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2.2. Label elements

Pictograms



Signal word:

Danger

Contains

Substance:

Feric sulphate; 2-methyl-2H-isothiazol-3-one; Cedrus deodara tree oil;

Hazard statements

H315

Causes skin irritation.

H317

May cause an allergic skin reaction.

H318

Causes serious eye damage.

H335

May cause respiratory irritation.

Precautionary statements

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P305+351+338+310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P501

Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

Assessment to determine PBT and vPvB has not been made.

Endocrine disrupting properties: None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No./ EC No./ UK-REACH Reg. No.	Concentration	Notes	CLP-classification
Saponin	8047-15-2 232-462-6	25 - 50 %		Eye Irrit. 2;H319 STOT SE 3;H335
Iron (II) sulfate	7720-78-7 231-753-5	10 - 20 %		Acute Tox. 4;H302 Skin Irrit. 2;H315 Eye Irrit. 2;H319
Feric sulphate	10028-22-5 233-072-9	1 - 5 %		Met. Corr. 1;H290 Acute Tox. 4;H302 Skin Irrit. 2;H315 Eye Dam. 1;H318
Citric acid monohydrate	5949-29-1 201-069-1	1 - 5 %		Eye Irrit. 2;H319
2-methyl-2H-isothiazol-3-one	2682-20-4 220-239-6	0.1 - 1 %		Acute Tox. 3;H301 Skin Corr. 1B;H314 Skin Sens. 1A;H317 Eye Dam. 1;H318 Acute Tox. 2;H330 Aquatic Acute 1;H400 Aquatic Chronic 2;H411 EUH071 C ≥ 0.0015%: Skin Sens. 1A;H317 M (acute): 10 M (chronic): 1
Cedrus deodara tree oil	91771-47-0 294-939-5	0.1 - 1 %		Skin Irrit. 2;H315 Skin Sens. 1;H317 Aquatic Chronic 2;H411

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Please see section 16 for the full text of H- / EUH-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Seek fresh air. Seek medical advice in case of persistent discomfort.

Ingestion: Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice.

Skin contact: Remove contaminated clothing. Wash the skin with water. Seek medical advice in case of persistent discomfort.

Eye contact: Open eye wide, remove any contact lenses and flush immediately with water (preferably using eye wash equipment). Seek medical advice immediately. Continue flushing until medical attention is obtained.

General: When obtaining medical advice, show the safety data sheet or label.

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

Inhalation of spray mist is irritating to the upper airways. Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight. Irritating to skin - may cause reddening. May cause sensitisation by skin contact. Symptoms include reddening, swelling, blistering and ulceration - often slowly developing.

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

Treat symptoms. No special immediate treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with powder, foam or water mist. Use water or water mist to cool non-ignited stock.

Unsuitable extinguishing media: Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

Can generate harmful flue gases containing carbon monoxide in the event of fire.

5.3. Advice for firefighters

Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Stay upwind/keep distance from source. Stop leak if this can be done without risk. Wear safety goggles/face protection. Wear gloves. Wear respiratory protective equipment.

For emergency responders: In addition to the above: Chemical protective suit equivalent to EN 943-2 is recommended.

6.2. Environmental precautions

Do not discharge large quantities of concentrated spills and residue into drains. Prevent spillage from entering drains and/or surface water.

6.3. Methods and material for containment and cleaning up

Contain and absorb spill with sand or other absorbent material and transfer to suitable waste containers.

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6.4. Reference to other sections

See section 8 for type of protective equipment.
See section 13 for instructions on disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Keep in tightly closed original packaging. Store in a dry, cool, well-ventilated area.

7.3. Specific end use(s)

No special uses in addition to identified uses in 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit: Contains no substances subject to reporting requirements.

Measuring methods: Compliance with occupational exposure limits may be checked by occupational hygiene measurements.

Legal basis: EH40/2005 Workplace exposure limits. Last amended January 2020.

PNEC

Citric acid monohydrate, cas-no 5949-29-1

Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	0,44 mg/l			
PNEC aqua (marine water)	0,044 mg/l			
PNEC sediment (freshwater)	3,46 mg/l			
PNEC sediment (marine water)	34,6 mg/l			
PNEC STP (wastewater-treatment facilities)	>1000 mg/l			
PNEC soil	33,1 mg/kg			

2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4

Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC STP (wastewater-treatment facilities)	0,23 mg/l			
PNEC soil	0,047 mg/kg			
PNEC aqua (freshwater)	0,00339 mg/l			
PNEC aqua (intermittent releases)	0,00339 mg/l			
PNEC aqua (marine water)	0,00339 mg/l			

DNEL - workers

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Iron (II) sulfate, cas-no 7720-78-7					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Dermal DNEL (long-term exposure - systemic effects)	2,8 mg/kg				
2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - local effects)	0,021 mg/m ³				
Inhalation DNEL (acute/short-term exposure - local effects)	0,043 mg/m ³				

DNEL - general population

Iron (II) sulfate, cas-no 7720-78-7					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Oral DNEL (acute/short-term exposure - systemic effects)	20 mg/kg				
Oral DNEL (long-term exposure - systemic effects)	0,28 mg/kg				
Dermal DNEL (long-term exposure - systemic effects)	1,4 mg/kg				
2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Oral DNEL (acute/short-term exposure - systemic effects)	0,053 mg/kg				
Inhalation DNEL (acute/short-term exposure - local effects)	0,043 mg/m ³				
Oral DNEL (long-term exposure - systemic effects)	0,027 mg/kg				
Inhalation DNEL (long-term exposure - local effects)	0,021 mg/m ³				

8.2. Exposure controls

Appropriate engineering controls:

Wear the personal protective equipment specified below.
Use the product under well-ventilated conditions.

Personal protective equipment, eye/face protection: Wear safety goggles/face protection. Eye protection must conform to EN 16321.

Personal protective equipment, hand protection: Wear gloves. Type of material: Neoprene rubber/ Nitrile rubber. Breakthrough time has not been determined for the product. Change gloves often.

The suitability and durability of a glove is dependant on usage, e.g. frequency and duration of contact, glove material thickness, functionality and chemical resistance. Always seek

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advice from the glove supplier.

Personal protective equipment, Preparation: Wear respiratory protective equipment. Filter type: P. **respiratory protection:**

In case of risk of formation of spray mist, wear respiratory protective equipment with P2 filter.

Respiratory protection must conform to one of the following standards: EN 136/140/145.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Liquid
Colour	Black
Odour	Characteristic Sour
Solubility	Soluble in the following: Water.

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	No data	
Freezing point	No data	
Boiling point or initial boiling point and boiling range	No data	
Flammability	No data	
Flammability limits	No data	
Lower and upper explosion limit	No data	
Flash Point	No data	
Auto-ignition temperature	No data	
Decomposition temperature	No data	
pH (solution for use)	No data	
pH (concentrate)	3.8	
Kinematic viscosity	No data	
Viscosity	No data	
Partition coefficient n-octanol/water (log value)	No data	
Vapour pressure	No data	
Density	No data	
relative density	No data	
Relative vapour density	No data	
Relative density (sat. air)	No data	
Particle characteristics	No data	

9.2. Other information

Other Information: None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No known data.

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

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10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Can generate harmful flue gases containing carbon monoxide in the event of fire.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - oral

Saponin, cas-no 8047-15-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 5000 mg/kg			

Iron (II) sulfate, cas-no 7720-78-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		1480 mg/kg			

Feric sulphate, cas-no 10028-22-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		500 mg/kg			

Citric acid monohydrate, cas-no 5949-29-1

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		3000 mg/kg			

2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		120 mg/kg			

Cedrus deodara tree oil, cas-no 91771-47-0

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 5000 mg/kg bw/day			

Ingestion may cause discomfort. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Acute toxicity - dermal

Saponin, cas-no 8047-15-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 5000 mg/kg			

Citric acid monohydrate, cas-no 5949-29-1

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		5000 mg/kg			

2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		242 mg/kg			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

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Acute toxicity - inhalation:	The product does not have to be classified. Test data are not available.
Skin corrosion/irritation:	Irritating to skin - may cause reddening.
Serious eye damage/eye irritation:	Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight.
Respiratory sensitisation or skin sensitisation:	May cause sensitisation by skin contact. Symptoms include reddening, swelling, blistering and ulceration - often slowly developing.
Germ cell mutagenicity:	The product does not have to be classified. Test data are not available.
Carcinogenic properties:	The product does not have to be classified. Test data are not available.
Reproductive toxicity:	The product does not have to be classified. Test data are not available.
Single STOT exposure:	Inhalation of spray mist is irritating to the upper airways.
Repeated STOT exposure:	The product does not have to be classified. Test data are not available.
Aspiration hazard:	The product does not have to be classified. Test data are not available.

11.2. Information on other hazards

Endocrine disrupting properties:	None known.
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Other toxicological effects:	None known.
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SECTION 12: Ecological information

12.1. Toxicity

Citric acid monohydrate, cas-no 5949-29-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Crustacea	Daphnia magna		48hEC50	0.934 mg/l			
Fish	Leopomis macrochirus		96hEC50	1516 mg/l			

2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Oncorhynchus mykiss		96hLC50	4.77 mg/l			
Crustacea	Daphnia magna		48hEC50	0.934 mg/l			

Cedrus deodara tree oil, cas-no 91771-47-0

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Algae	Name of species not specified		EC50 / LC50	8.8 mg/l			
Crustacea	Daphnia sp.		EC50 / LC50	7.8 mg/kg food			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

12.2. Persistence and degradability

Citric acid monohydrate, cas-no 5949-29-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
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	5 d		72 %				
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2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
		28 d		55.8 %			

The product contains at least one readily biodegradable substance.

12.3. Bioaccumulative potential

Citric acid monohydrate, cas-no 5949-29-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Pow	- 1.64			
			BCF	3			

2-methyl-2H-isothiazol-3-one, cas-no 2682-20-4

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Pow	- 0.49			

The product contains at least one substance with low bioaccumulative potential. Test data are not available for all substances.

12.4. Mobility in soil

Citric acid monohydrate, cas-no 5949-29-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
					High		

Expected to be mobile in soil. Test data are not available for all substances.

12.5. Results of PBT and vPvB assessment

No assessment has been made.

12.6. Endocrine disrupting properties

None known.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Do not discharge large quantities of concentrated spills and residue into drains.

If this product as supplied becomes a waste, it meets the criteria of a hazardous waste (Dir. 2008/98/EU). Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.

Empty, cleansed packaging should be disposed of for recycling. Uncleansed packaging is to be disposed of via the local waste-removal scheme.

Category of waste:

EWC code: Depends on line of business and use, for instance 02 01 08* agrochemical waste containing hazardous substances

Absorbent/cloth contaminated with the product: EWC code: 15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances.

SECTION 14: Transport information

14.1. UN number or ID number: Not applicable.

14.2. UN proper shipping name: Not applicable.

14.4. Packing group:

14.5. Environmental hazards:

Not applicable.

Not applicable.

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14.3. Transport hazard class(es): Not applicable.

14.6. Special precautions for user

None.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

Special Provisions: Special care should be applied for employees under the age of 18. Young people under the age of 18 may not carry out any work causing harmful exposure to this product.

Covered by:
The Health and Safety (Young Persons) Regulations 1997.

15.2. Chemical Safety Assessment

UK-REACH Reg. No.	Substance name
	Iron (II) sulfate
	Citric acid monohydrate
	2-methyl-2H-isothiazol-3-one

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
2.2.0	12/02/2025	MPE	1, 7, 8, 16

Abbreviations:

DNEL: Derived No Effect Level
PBT: Persistent, Bioaccumulative and Toxic
PNEC: Predicted No Effect Concentration
STOT: Specific Target Organ Toxicity
vPvB: Very Persistent and Very Bioaccumulative

Other Information:

This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with Regulation 1907/2006/EC "The Registration, Evaluation and Authorization of Chemicals" as amended by the stationary UK REACH etc. (EU Exit) as subsequently changed.

Training advice:

A thorough knowledge of this safety data sheet should be a prerequisite condition.

Classification method:

Calculation based on the hazards of the known components. Test data.

Hazard statements

H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

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H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Supplemental hazard information

EUH071 Corrosive to the respiratory tract.

SDS is prepared by

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