

Safety Data Sheet

TourTurf (FS) Mangan

Issued: 09/12/2020
Version: 1.0.0

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

1.1. Product identifier

Trade name: TourTurf (FS) Mangan

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
Phone: 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: Eye Dam. 1;H318 STOT RE 2;H373 Aquatic Chronic 2;H411

Most serious harmful effects: Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Pictograms



Signal word: Danger

Contains

Substance: Manganese sulphate, monohydrate;

H-phrases

H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

P-phrases

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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P273	Avoid release to the environment.
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.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

Assessment to determine PBT and vPvB has not been made.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No	EC No	REACH Reg. No.	Concentration	Notes	CLP-classification
Manganese sulphate, monohydrate	10034-96-5	232-089-9	01-2119456624-35	25 - 50%		Eye Dam. 1;H318 STOT RE 2;H373 Aquatic Chronic 2;H411

Please see section 16 for the full text of H-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 in case of persistent discomfort.
Skin contact:	Remove contaminated clothing. Seek medical advice in case of persistent discomfort. Wash the skin with water.
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

Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight. May irritate the skin - may cause reddening. May cause damage to organs through prolonged or repeated exposure.

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

Treat symptoms. Ensure that medical personnel are aware of the material involved, and take precautions to protect themselves.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media:	The product is not directly flammable. Choose extinguishing agents based on the surrounding fire.
Unsuitable extinguishing media:	Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

The product decomposes when combusted and the following toxic gases can be formed: Sulphur oxides.

5.3. Advice for fire-fighters

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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 gloves. Wear safety goggles/face protection.

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

6.2. Environmental precautions

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.

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

The product should be used outdoors. 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. Store in a cool, dry place. Do not store with the following: Acids/ Metals/ Strong oxidisers/ Strong reducing agents.

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 the stated occupational exposure limits may be checked by occupational hygiene measurements.

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

PNEC

Manganese sulphate, monohydrate, cas-no 10034-96-5				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	0,0128 mg/l			
PNEC aqua (marine water)	0,0004 mg/l			
PNEC aqua (intermittent releases)	0,03 mg/l			
PNEC sediment (freshwater)	0,0114 mg/kg dw			

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PNEC sediment (marine water)	0,00114 mg/kg dw			
PNEC STP (wastewater-treatment facilities)	56 mg/l			
PNEC soil	25,1 mg/kg dw			

DNEL - workers

Manganese sulphate, monohydrate, cas-no 10034-96-5

Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Dermal DMEL (long-term exposure - systemic effects)	0,00414 mg/kg bw/day				
Inhalation DNEL (long-term exposure - systemic effects)	0,2 mg/m ³				

DNEL - general population

Manganese sulphate, monohydrate, cas-no 10034-96-5

Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Dermal DMEL (long-term exposure - systemic effects)	0,0021 g/kg bw/day				
Inhalation DNEL (long-term exposure - systemic effects)	0,043 mg/m ³				

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles/face protection. Eye protection must conform to EN 166.

Personal protective equipment, hand protection: Wear gloves. Type of material: Rubber/ Plastic. Breakthrough time has not been determined for the product. Change gloves often. Gloves must conform to EN 374. 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 advice from the glove supplier.

Personal protective equipment, 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	Light brown
Odour	Characteristic
Solubility	Soluble in the following: Water.
Explosive properties	No data
Oxidising properties	No data

Parameter	Value/unit	Remarks
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pH (solution for use)	No data	
pH (concentrate)	5.5	
Melting point	No data	
Freezing point	No data	
Initial boiling point and boiling range	No data	
Flash Point	No data	
Evaporation rate	No data	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	No data	
Vapour pressure	No data	
Vapour density	No data	
Relative density	No data	
Partition coefficient n-octanol/water	No data	
Auto-ignition temperature	No data	
Decomposition temperature	No data	
Viscosity	No data	
Odour threshold	No data	

9.2 Other information

Other Information: None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with the following: Acids/ Metals/ Oxidisers/ Strong reducing agents.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Acids/ Metals/ Oxidisers/ Strong reducing agents.

10.6. Hazardous decomposition products

Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral: The product does not have to be classified. Test data are not available. Ingestion may cause discomfort.

Acute toxicity - dermal: The product does not have to be classified. Test data are not available.

Acute toxicity - inhalation: The product does not have to be classified. Test data are not available.

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Skin corrosion/irritation:	The product does not have to be classified. Test data are not available. May irritate the 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:	The product does not have to be classified. Test data are not available.
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:	The product does not have to be classified. Test data are not available.
Repeated STOT exposure:	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard:	The product does not have to be classified. Test data are not available.
Other toxicological effects:	None known.

SECTION 12: Ecological information

12.1. Toxicity

Manganese sulphate, monohydrate, cas-no 10034-96-5

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Name of species not specified	96 h	96hLC50	14.5mg/l		OECD TG 203	
Crustacea	Hyallolella azteca	96 h	96hLC50	3mg/l		Static	
Algae	Desmodesmus subspicatus	72 h	72hEC50	61mg/l		OECD 201, static	
Bacteria	Name of species not specified	3 h	3hEC50	> 1000mg/l		OECD 209	

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Test data are not available.

12.3. Bioaccumulative potential

Test data are not available.

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

No assessment has been made.

12.6. Other adverse effects

None known.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid discharge to drain or surface water.

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

Land transport (ADR/RID)

14.1. UN-No.:	3082	14.4. Packing group:	III
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Manganese sulphate, monohydrate)	14.5. Environmental hazards:	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	9		
Hazard label(s):	9		
Hazard identification number:	90	Tunnel restriction code:	-

Inland water ways transport (ADN)

14.1. UN-No.:	3082	14.4. Packing group:	III
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Manganese sulphate, monohydrate)	14.5. Environmental hazards:	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	9		
Hazard label(s):	9		
Transport in tank vessels:			

Sea transport (IMDG)

14.1. UN-No.:	3082	14.4. Packing group:	III
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Manganese sulphate, monohydrate)	14.5. Environmental hazards:	The product must be labelled as a Marine Pollutant (MP) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	9	Environmental Hazardous Substance Name(s):	
Hazard label(s):	9		
EmS:	F-A, S-F	IMDG Code segregation group:	- None -

Air transport (ICAO-TI / IATA-DGR)

14.1. UN-No.:	3082	14.4. Packing group:	III
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14.2. UN proper shipping name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Manganese sulphate, monohydrate)

14.5. Environmental hazards:

The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.

14.3. Transport hazard class(es):

9

Hazard label(s):

9

14.6. Special precautions for user

None.

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

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:

Council Directive (EC) on the protection of young people at work.

15.2. Chemical Safety Assessment

REACH Reg. No.	Substance name
01-2119456624-35	Manganese sulphate, monohydrate

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
1.0.0	09/12/2020	Bureau Veritas HSE / MPE	New

Abbreviations:

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

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 1907/2006/EC (REACH) 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.

List of relevant H-statements

H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

SDS is prepared by

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Document language: GB