

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

- 1.1 Product Identifier TourPlex Mn
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
Relevant uses: Use as a professional use fertiliser.
- 1.3. Details of the supplier of the safety data sheet
Company: Tour Best LLC, P.O. Box 127414, Dubai, UAE.
Phone: +971 (0) 50 344 1381
Email: golf@tourbest.ae
- 1.4. Emergency telephone number +44 (0) 7725 962 366

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

CLASSIFICATION according to Directive EC 1272/2008 Classification, Labelling and Packaging

- Acute Tox. 4: H302: Harmful if swallowed.
Skin Irrit. 2: H315: Causes skin irritation.
Eye Dam. 1: H318: Causes serious eye damage.
STOT Rep 2: H373: May cause damage to organs through prolonged or repeated exposure.
Aquatic Ac. 1: H400: Very toxic to aquatic life
Aquatic Chr. 1: H410: Very toxic to aquatic life with long lasting effects

CLASSIFICATION according to Directive 1999/45/EC and statutory instrument No.716 2009 Chemicals (Hazard Information and Packaging)

- Xn; R22: Harmful if swallowed.
Xi; R36/38: Irritating to eyes and skin.
Xn; R48/20/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
N; R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Primary Hazard: Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Contains: Manganese sulphate E.C. 232-089-9



Signal word: Danger

Hazard Statements: H302: Harmful if swallowed.
 H315: Causes skin irritation.
 H318: Causes serious eye damage.
 H373: May cause damage to organs through prolonged or repeated exposure.
 H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements P260: Do not breathe mist/vapours/spray.
 P280: Wear protective gloves/eye 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.





P310: Immediately call a POISON Center or doctor/physician.
P391: Collect spillage
P501: Dispose of contents/container in accordance with local/national regulations.

2.3. Other hazards

Mixture not classed as PBT or vPvB.

SECTION 3: Composition/Information on Ingredients

Hazardous components:

Identification	Chemical Name/Classification	Concentration	
CAS: 10034-96-5 EC: 232-089-9 INDEX: 025-003-00-4 REACH: 01-2119456624-35	Manganese Sulphate	10.0-20.0%	
	Directive 67/548/EC		R48/20/22; R51/53 
	Regulation 1272/2008		Eye Dam. 1 - H318; STOT Rep. 2, H373; Aqu. Tox. chron. 2, H411 
CAS: 77-92-9 EC: 201-069-1 REACH: 01-2119457026-42	Citric Acid	<5.0%	
	Directive 67/548/EC		R36 
	Regulation 1272/2008		Eye Irrit. 2, H319 

The full text and symbols for all hazard information if not displayed in section 2 or 3 are displayed in Section 16

SECTION 4: First-Aid Measures
4.1. Description of first aid measures

By inhalation: Remove from source of exposure to fresh air; seek medical attention.
By skin contact: Drench immediately with water. Remove any contaminated clothing and launder before re-use. Seek medical attention if symptoms persist or develop.
By eye contact: Rinse cautiously for several minutes, Remove contact lenses, if present and easy to do, rinse with clean water for 15 minutes. Seek medical attention IMMEDIATELY.
By consumption: Do not induce vomiting. Wash out mouth with water and give water to drink. Obtain medical attention IMMEDIATELY.

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

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.

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

Information not available

SECTION 5: Fire-Fighting Measures
5.1. Extinguishing media

Use Foam, carbon dioxide, dry powder, sand. The mixture is not classified as flammable as such extinguishing media should be chosen as appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Possible irritant fumes arising from combustion.

5.3. Advice for fire-fighters

Cool down containers/equipment exposed to heat with a water spray. Contain spread of extinguishing fluids (these fluids may be hazardous for the environment). Wear complete protective clothing and self-contained breathing apparatus.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified.

Use personal protective equipment: appropriate coveralls and gloves
eye/face protection
appropriate respirator

Avoid contact with skin and eyes

6.2. Environmental precautions

Do not allow to enter storm drains or water courses. If this product enters a water course or a sewer (including via contaminated soil & vegetation) in large quantities contact local water authority and inform the Environment Agency.

6.3. Methods and material for containment and cleaning up

Sweep avoiding generating dust into labelled containers for recovery or contact specialist waste disposal contractor.

6.4. Reference to other sections

No reference necessary.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Wash Hands thoroughly after handling

Do not eat, drink or smoke when using this product. remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool dry atmosphere, in original labelled containers. Refer to manufacturer for maximum safe stacking height. Keep away from heat sources, combustible materials.

7.3. Specific end use(s)

No specific information available.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Exposure limit values have not been determined for this mixture

Substance	CAS Number	Workplace Exposure Limit				Comments
		Long-term exposure limit (8-hr TWA reference period)		Short-term exposure limit (15 minute reference period)		
		ppm	mg.m ⁻³	ppm	mg.m ⁻³	
Manganese and its inorganic compounds (Mn)	-	-	0.5	-	-	The Carc, Sen and Sk notations are not exhaustive. Notations have been applied to the substances identified in IOELV Directives*

*IOELV – Indicative Occupational Exposure Limit Values (IOELV).

Sk Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

Manganese sulphate:

DNEL:

	Industry		Consumer	
Dermal	Long Term	4.14 µg/Kg/day	Long Term	2.1 µg/Kg/day
Inhalation	Long Term	0.2 mg/m ³	Long Term	0.043 mg/m ³

DNELs for the oral route, all “acute effects” and for “long-term local-effects” were not calculated and are not required for the “identified uses” covered in this SDS and the Chemical Safety Report (CSR).

PNEC:

Freshwater	0.0128 mg/l	Marinewater	0.4 µg/l
Sediment (Freshwater)	11.4 µg/kg	Sediment (Marinewater)	1.4 µg/kg
Soil	25.1 mg/kg	STP	56 mg/l
Spills(freshwater)	30 µg/l		

Soil & sediment PNEC values are mg/kg wet weight.

Citric acid:

PNEC:

Aquatic PNECaqua – freshwater (mg/l):	0.44	
PNECaqua – marine water (mg/l):	0.044	
PNECfreshwater-sediment (mg/kg d.w.):	3.46	(Equivalent to 0.752 mg/kg wwt)
The PNECmarine-sediment (mg/kg d.w.):	34.6	(Equivalent to 7.52 mg/kg wwt)
Terrestrial (PNECsoil mg/kg d.w.)	33.1	
Sewage treatment plant PNEC STP (mg/l)	>1000	
Atmospheric Compartment	Not applicable	

8.2. Exposure controls

Goggles – Eye Protection: goggles/face shield to BS EN166

Gloves – BS EN374 – chemical protection

Respirators – BS approved protection device with P3 filter

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance:	Off-white solid
Odour:	Information not specified
pH:	Information not specified
Melting point/freezing:	Information not specified
Flammability (solid, gas):	Information not specified
Specific gravity:	Information not specified

9.2. Other information

No other relevant information available.

SECTION 10: Stability and Reactivity**10.1. Reactivity**

Unknown.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Information not available.

10.4. Conditions to avoid

Extremes of temperature.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Possible Irritant fumes.

SECTION 11: Toxicological Information**11.1. Information on toxicological effects**

The mixture has not been assessed for toxicological effects, the mixture classification is given in section 2 based on individual component contents. Individual component hazards are given in section 3

Toxicological information on hazardous ingredients:**Manganese sulphate:****Acute toxicity:****Acute Toxicity (Oral LD50):**

2150 mg/kg Rat

Test method(s): Indian Journal of Pharmacology, 23(3): 153-159. REACH dossier information

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50):

Not determined.

Dermal absorption is unlikely due to the physical-chemical properties of the substance.

Acute Toxicity (Inhalation LC50):

> 4.45 mg/l (dust/mist) Rat 4 hours

Test method(s): OECD 403.

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Erythema\eschar score

No erythema (0).

Oedema score

No oedema (0).

Test method(s): OECD 404, not irritating.

Serious eye damage/irritation:

Irritating. Irritation score: 36 / 110

Test method(s): OECD 405.

Respiratory or skin sensitisation:

Skin sensitisation

Patch Test: Mouse

Not Sensitising.

REACH dossier information

Germ cell mutagenicity:

Genotoxicity - In Vitro

Gene Mutation: REACH dossier information - A surrogate substance (Manganese chloride) was used.

Test method(s): OECD 476. + 471.

Negative.

Genotoxicity - In Vivo

Chromosome aberration: REACH dossier information - A surrogate substance (Manganese chloride)

was used. Test method(s): OECD 474.



Carcinogenicity:	Negative. Carcinogenicity NOAEL (male) 615 mg/kg Oral Rat NOAEL (female) 715 mg/kg Oral Rat REACH dossier information - Test method(s): 70 male and 70 female rats were fed diets containing 0, 1, 500, 5, 000, or 15, 000 ppm manganese (II) sulphate monohydrate for 103 weeks. The level of manganese in the diet received by controls was approximately 92 ppm. As many as 10 rats per group were evaluated after 9 months and 15 months of chemical exposure. Based on available data the classification criteria are not met.
Reproductive Toxicity:	Reproductive Toxicity - Fertility Endpoint waived according to REACH Annex VII, IX or XI. Testing waived because a more severe health effect was found (STOT-RE class2). Controlling the risk of 'STOT-RE class 2' will control the risks for this endpoint. Suspected reproductive toxicant based on limited evidence. Reproductive Toxicity - Development Endpoint waived according to REACH Annex VII, IX or XI. Testing waived because a more severe health effect was found (STOT-RE class2). Controlling the risk of 'STOT-RE class 2' will control the risks for this endpoint. Suspected reproductive toxicant based on limited evidence.
Specific target organ toxicity - single exposure:	STOT - Single exposure; scientifically unjustified.
Specific target organ toxicity - repeated exposure:	STOT - Repeated exposure; not determined. Target Organs: Brain MnSO4 is already classified under Directive 67/548/EEC as R48/20/22 and under GHS as STOT RE2. Data exists showing some neurochemical changes at low levels after inhalation exposure for 90-days, together with locomotor changes, around 3 mg/m3 concentration, suggesting that significant toxicity could occur at the 20-200 mg/m3 concentration level, which supports the current classification of STOT RE 2 for the inhalation route.
Aspiration hazard:	Viscosity: Not applicable.
Inhalation:	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion:	May cause discomfort if swallowed.
Skin contact:	Powder may irritate skin.
Eye contact:	Route of entry. Particles in the eyes may cause irritation and smarting.
Inhalation:	Target Organs: Brain, eyes, respiratory system, lungs, skin
Citric acid	
Acute toxicity:	Ingestion LD50 (mouse): 5400 mg/kg bw Inhalation: No data Skin Contact. LD50 (dermal): >2000 mg/kg bw
Skin corrosion/irritation:	mild skin irritant
Eye Contact:	Irritating
Respiratory or skin sensitization:	Not a sensitizer
Mutagenicity:	Not a mutagen
Carcinogenicity:	Not a carcinogen
Reproductive toxicity:	Not a reproductive toxin

11.2. Other Information

None.

SECTION 12: Ecological Information

12.1. Toxicity

Mixture Classified as very toxic to aquatic life with long lasting effects to the environment in accordance with the Dangerous Preparations Directive 1999/45/EC.

Toxicity of ingredients where available:

Manganese sulphate:

Acute Toxicity - Fish:

LC50 96 hours 14.5 mg/l *Onchorhynchus mykiss* (Rainbow trout). REACH dossier information.

Acute Toxicity - Aquatic Invertebrates:

EC50 48 hours 9.8 mg/l *Daphnia magna*. A surrogate substance (Manganese chloride) was used. The units are expressed in 'mg/µg' of: Manganese. REACH dossier information.

Acute Toxicity - Aquatic Plants:

EC50 72 hours 61 mg/l. *Desmodesmus subspicatus* (algae). Test method(s): OECD 201. REACH dossier information.

Chronic Toxicity - Aquatic Invertebrates:

Not applicable. A variety of tests have indicated that a classification more severe than Aquatic Chronic 2 is not required (CSR 2010). REACH dossier information.

12.2. Persistence and degradability

Readily biodegradable

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

Not classified

12.6. Other adverse effects

Information not available

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Use only licensed waste disposal companies. Do not re-use empty containers for any purpose, dispose of packaging in accordance with local regulations.

SECTION 14: Transport Information

14.1 UN number:

UN3077

14.2 UN proper shipping name:

Environmentally hazardous preparation, solid N.O.S. (contains: Manganese sulphate E.C. 232-089-9)

14.3 Transport hazard:

9

14.4 Packing group:

III

14.5 Environmental hazards:

Product is classified as toxic to aquatic life with long lasting effects.

14.6 Special precautions for user:

Not specified

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:

Applicable for Maritime bulk transport only. Check with carrier.

SECTION 15: Regulatory Information

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

This substance is classified and labelled in accordance with regulation 1999/45/EC, 1272/2008, the statutory instrument No.716 2009 Chemicals (Hazard Information and Packaging) regulations and the EC Fertiliser Regulations 2003, Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC).

15.2. Chemical Safety Assessment

CSA not undertaken for this substance.

16. OTHER INFORMATION

The information contained herein relates only to the designated formulation and may not be valid if product is used in combination with other substances. The information is to the best of our knowledge, belief and understanding, true, accurate and reliable at the date of issue. However, the information may neither be exhaustive or complete, and no warranty, guarantee or liability concerning the accuracy or completeness of the information is expressed or implied. It is the user's risk and sole responsibility to verify and satisfy their own criteria and duty of care concerning the validity of the information in relation to their application of the product.

ISSUE 1 08/15 GCL
