

# MATERIAL SAFETY DATA SHEET

Date of issue: 27.12.03

(Supersedes all previous issues)

## 1 IDENTIFICATION OF THE PRODUCT AND THE COMPANY

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PRODUCT NAME AND BRAND : **FOLIAR MANGANESE**  
SUPPLIER : 4 Perfect Turf Ltd  
ADDRESS : Northgate White Lund Industrial Estate Morecambe LA3 3PA  
CONTACT Nos : 01524 381 999

## 2 COMPOSITION - INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS No.	HAZARD	SAFETY	RISK
MANGANESE (SOLUTION)	10034-96-5	Xn /N	S24/25	R48/22 52/53

AND A BLEND OF SURFACTANTS TO ENHANCE TANK MIXING COMPATIBILITY FROM WHICH NO HAZARD IS DERIVED

## 3 HAZARDS IDENTIFICATION

FIRE HAZARD : TOXIC FUMES OF SULFUR DIOXIDE ON DECOMPOSITION  
IRRITANT : IRRITANT TO SKIN AND EYES.  
INGESTION : HARMFUL IF SWALLOWED

## 4 FIRST AID MEASURES

EYES : Contact with eyes may cause IRRITATION. If symptoms persist seek medical aid.  
Irrigate with copious amounts of EYEWASH or clean water for 10 minutes minimum.  
If symptoms persist seek medical attention.

SKIN : Contact with skin may cause IRRITATION. If symptoms persist seek medical aid.  
Wash immediately with soap and rinse with copious amounts of water.  
If symptoms persist seek medical attention.

INHALATION : Not Applicable, as product is a liquid formulation. If spray mist is inhaled remove from source of inhalation and keep warm. If symptoms persist seek medical attention.

INGESTION : May cause systemic damage and gastro-intestinal IRRITATION.  
Do not induce vomiting. Give copious amounts of water to drink.  
If vomiting occurs place patient in the recovery position. Seek medical aid if symptoms persist.

## 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Either: Alcohol resistant foam, Water, Dry Chemical, Carbon Dioxide Sprays, sand or earth.

SPECIAL FIRE FIGHTING PROCEDURES : Wear self contained breathing apparatus.

HAZARDOUS ON DECOMPOSITION : NON-COMBUSTIBLE but toxic fumes of SULFUR DIOXIDE may be released.

## 6 ACCIDENTAL RELEASE MEASURES

PRECAUTIONS : Avoid contact with skin and eyes

SMALL SPILLAGE : Dilute and flush to drain with copious amounts of water.

LARGE SPILLAGE : Evacuate area. Absorb and contain spillage with sand or earth. Place waste in sealed containers. Contact Local Authority for controlled waste disposal.  
Notify Water Authority if large spillage enters drains or sewers.

## 7 HANDLING AND STORAGE

USAGE PRECAUTIONS : Wear full overall protective clothing, PVC or rubber Gloves and Boots.  
: If exposed to high vapour concentration in a confined area, wear self contained breathing apparatus. In well ventilated areas, wear fume mask.

STORAGE PRECAUTIONS : Keep sealed in original containers. Store in frost-free conditions above 2°C.

## 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS : Apply COSHH assessment according to standard (OES) EH 40/94

EXPOSURE LIMITS : MANGANESE Compounds as (Mn) 5mg/M3 (8 hour TWA)  
Fumes as (Mn) 1mg/M3 (8 hour TWA)  
3mg/M3 (10 min.STEL)

PROTECTIVE EQUIPMENT : Wear full protective overall clothing.

HANDS AND FEET : Wear PVC or rubber gloves and Boots

EYES AND FACE : Wear Face shield of goggles to BS 2092

RESPIRATION : Wear self contained breathing apparatus in confined conditions or Fume mask to BS 2091..

## 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	: Brown coloured solution.	ODOUR	: Odourless
SPECIFIC GRAVITY	: 1.361 - 1.400@ 15°C	SOLUBILITY	: Complete in water
pH (Concentrate)	: 1.4 - 2.4		
pH (1%)	: 5.5 - 6.5		

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**10 STABILITY AND REACTIVITY**

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STABILITY : Stable in normal ambient conditions.  
MATERIALS TO AVOID :  
HAZARDOUS DECOMPOSITION : Release of toxic Fumes (Sulphur Dioxide)

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**11 TOXICOLOGICAL INFORMATION**

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Excessive exposure may cause IRRITATION to Respiratory tract, Skin and Eyes.  
Symptoms may be Dry Throat, Shallow Respiration, Headache, Irritability, Dyspnoea, Redness of Skin and Eyes, Dermatitis, and Fever (Similar to Metal Fume Fever)  
EXCESSIVE INGESTION AND INHALATION over long periods may cause damage to Central Nervous System.  
Symptoms may be Muscular Spasm, Slow Spasmodic Gait, Postural Instability, Imbalance and Diminished Mental Ability.

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**12 ECOLOGICAL INFORMATION**

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PRECAUTIONS : Advise relevant authorities immediately if water sources or soil is contaminated.  
DEGRADABILITY : Manganese compounds are mainly resistant to Degradation.  
AQUATIC TOXICITY : Toxic to Fish and Aquatic life in high Concentrations.

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**13 DISPOSAL CONSIDERATIONS**

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DISPOSAL METHODS : Flush small quantities to drain with copious amounts of water.  
: Large quantities require controlled waste disposal in accordance with CONTROL OF POLLUTION ACT 1974 and SPECIAL WASTE REGULATIONS 1980.  
PACKAGING : Do not re-use packaging for any other purpose.  
: Dispose of used packaging in accordance with SPECIAL WASTE REGULATIONS 1980.

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**14 TRANSPORT INFORMATION**

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TRANSPORT : MATERIAL IS NOT CLASSIFIED AS HAZARDOUS OR DANGEROUS FOR TRANSPORT ACCORDING TO CURRENT INTERNATIONAL REGULATIONS.  
LAND-ROAD-RAIL (RID/ADR): UN No.  
SEA (IMO/IMG):  
AIR (ICAO/IATA): Item No.  
Hazard No.  
Hazchem Code:  
Packaging Group:  
Tremcard No.  
Marine:

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**15 REGULATORY INFORMATION**

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LABELLING EEC REGULATIONS: MATERIAL IS CLASSIFIED BY CHIP REGULATIONS FOR SUPPLY AS FOLLOWS;

MANDATORY HAZARD SYMBOL : Xn  
RISK PHRASES : R 48/22 HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE IF SWALLOWED  
R52/53 HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT

SAFETY PHRASES: S61 AVOID RELEASE INTO THE ENVIRONMENT. REFER TO SPECIAL S 2 KEEP OUT OF REACH OF CHILDREN  
INSTRUCTIONS/ HEALTH AND SAFETY DATA SHEET

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**16 OTHER INFORMATION**

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DATA SOURCES: MANUFACTURERS INFORMATION, CURRENT LEGISLATION AND REGULATIONS, SAX-DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS

EXCEPTIONS: THE PRODUCT IS A DILUTE LIQUID FORMULATION OF THE ACTIVE SUBSTANCE AND THEREBY EXCLUDES THE AIRBORNE DUST INHALATION HAZARDS AND RISKS NORMALLY ASSOCIATED WITH POWDER FORMULATIONS.

**VALIDITY**

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.

**RESPONSIBILITY**

It is the users 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 INFORMATION**

Date: 080102

Prepared by: NCK 080102

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