

DATE OF ISSUE: 24<sup>TH</sup> DECEMBER 2007

**BARMAC INDUSTRIES PTY LTD**  
**BOX FLAT ESTATE SWANBANK RD. SWANBANK Q 4306**  
**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BARMAC MANNI-TURF Mn**  
**PHONE: (07) 3280 3000**  
**EMERGENCY AFTER HOURS NUMBER: (07) 3280 3000**

---

Classified as **NON-HAZARDOUS** by Worksafe Australia Criteria

---

**IDENTIFICATION**

---

**OTHER NAMES:** N/A  
**USE:** Micronutrient fertiliser  
**UN NUMBER:** N/A  
**HAZCHEM CODE:** N/A  
**DANGEROUS GOODS CLASS:** N/A  
**POISONS SCHEDULE:** N/A

**PHYSICAL DESCRIPTION/PROPERTIES**

**APPEARANCE:** Peach coloured liquid with no odour.  
**FLASHPOINT ( ° C):** Does not flash.  
**BOILING POINT ( ° C):** N/A  
**FLAMMABILITY LIMITS (%):** N/A  
**VAPOUR PRESSURE (\_\_\_):** N/A  
**SOLUBILITY IN WATER (g/L):** Miscible.  
**SPECIFIC GRAVITY:** N/A  
**pH:** Not determined  
**VAPOUR DENSITY (air = 1):** N/A  
**FREEZING POINT:** 0°C  
**DENSITY:** 4.49kg/3.74 L (1.19)  
**EVAPORATION RATE:** Not determined  
**VISCOSITY:** Viscosity  
**% VOLATILE:** N/A  
**OCTANOL/WATER PARTION COEFFICIENT:** N/A  
**STAURATED VAPOR CONCENTRATION:** N/A

**INGREDIENTS**

<b><u>CHEMICAL ENTITY</u></b>	<b><u>CAS NO</u></b>	<b><u>PROPORTION</u></b>
Non hazardous ingredients		100%

DATE OF ISSUE: 24<sup>TH</sup> DECEMBER 2007

**BARMAC INDUSTRIES PTY LTD**  
**BOX FLAT ESTATE SWANBANK RD. SWANBANK Q 4306**  
**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BARMAC MANNI-TURF Mn**  
**PHONE: (07) 3280 3000**  
**EMERGENCY AFTER HOURS NUMBER: (07) 3280 3000**

---

Classified as **NON-HAZARDOUS** by Worksafe Australia Criteria

---

**HEALTH HAZARD INFORMATION**

---

**HEALTH EFFECTS**

**ACUTE:**

**SWALLOWED:** May cause stomach cramps and/or nausea.

**EYES:** May cause temporary eye irritation.

**SKIN:** May cause slight irritation, especially from prolonged exposure. May cause redness.

**INHALED:** None expected but inhalation may cause mild irritation of nasal mucous membranes.

**SUBCHRONIC EFFECTS:** N/A

**CHRONIC:** N/A

**FIRST AID**

**SWALLOWED:** If conscious and alert, administer water or milk to dilute, then induce vomiting. Call Poisons Information Centre on 13 11 26 or physician immediately. Do not give anything by mouth to an unconscious person.

**EYES:** Rinse eyes with plenty of running water for at least 15 minutes. Get medical attention if irritation persists.

**SKIN:** Wash with plenty of water and soap. Remove contaminated clothing and shoes. Get medical attention if irritation persists.

**INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth and get medical attention.

**FIRST AID FACILITIES:** Normal first aid facilities should suffice.

**ADVICE TO DOCTOR:** Treat symptomatically.

---

DATE OF ISSUE: 24<sup>TH</sup> DECEMBER 2007

**BARMAC INDUSTRIES PTY LTD**  
**BOX FLAT ESTATE SWANBANK RD. SWANBANK Q 4306**  
**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BARMAC MANNI-TURF Mn**

**PHONE: (07) 3280 3000**

**EMERGENCY AFTER HOURS NUMBER: (07) 3280 3000**

---

**Classified as NON-HAZARDOUS by Worksafe Australia Criteria**

---

**PRECAUTIONS FOR USE**

---

**EXPOSURE STANDARDS:** N/A

**ENGINEERING CONTROLS:** N/A

**PERSONAL PROTECTION:**

**EYES:** Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.

**SKIN:** Impervious gloves and clothes.

**RESPIRATORY:** Not normally needed. If use generated and aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).

**VENTALIATION:** Recommended but no TLV established.

**FLAMMABILITY:** N/A

DATE OF ISSUE: 24<sup>TH</sup> DECEMBER 2007

**BARMAC INDUSTRIES PTY LTD**  
**BOX FLAT ESTATE SWANBANK RD. SWANBANK Q 4306**  
**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BARMAC MANNI-TURF Mn**

**PHONE: (07) 3280 3000**

**EMERGENCY AFTER HOURS NUMBER: (07) 3280 3000**

---

**Classified as NON-HAZARDOUS by Worksafe Australia Criteria**

---

**SAFE HANDLING INFORMATION**

---

**STORAGE AND TRANSPORT:** Store in original container only in a cool, well-ventilated, dry place at temperatures between 4 and 35°C. Do not store near food or feeds. Do not stack pallets more than two (2) high. Transfer Product using chemical-resistant plastic or stainless steel tanks, pumps, valves, ect. Keep out of children. Harmful if swallowed. Avoid breathing spray mists or vapours. Avoid contamination of feed or foodstuffs. After using this product remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water.

**D.O.T.:**

Not D.O.T. regulated

**OTHER SHIPPING DESCRIPTION:**

Fertilizing compounds (Manufactured), Liquid.  
NMFC Item 68140 Sub 6, LTL Class 70

**SPILLS AND DISPOSAL:** Prevent product spillage from entering drinking water supplies or streams. Collect liquid or absorb onto absorbent material and package for disposal. Do not contaminate lakes, streams, ponds, estuaries, oceans, or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents in accordance with state and local waste disposal regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal.

DATE OF ISSUE: 24<sup>TH</sup> DECEMBER 2007

**BARMAC INDUSTRIES PTY LTD**  
**BOX FLAT ESTATE SWANBANK RD. SWANBANK Q 4306**  
**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BARMAC MANNI-TURF Mh**  
**PHONE: (07) 3280 3000**  
**EMERGENCY AFTER HOURS NUMBER: (07) 3280 3000**

---

Classified as **NON-HAZARDOUS** by Worksafe Australia Criteria

---

**FIRE/EXPLOSION HAZARD:**

**TEST METHOD:** N/A  
**LEL FLAMMABLE LIMITS:** N/A  
**UEL FLAMMABLE LIMITS:** N/A  
**AUTOIGNITION TEMPERATURE:** N/A  
**FLAMMABILITY CLASSIFICATION:** Nonflammable  
**KNOWN HAZARDOUS PRODUCTS OF COMBUSTION:** Not known  
**PROPERTIES THAT INITIATE/CONTRIBUTE TO INTENSITY OF FIRE:** Not known  
**POTENTIAL FOR DUST EXPLOSION:** None  
**REACTIONS THAT RELEASE FLAMMABLE GASES OR VAPORS:** Not known  
**POTENTIAL FOR RELEASE OF FLAMMABLE VAPORS:** Not known  
**UNUSUAL FIRE & EXPLOSION HAZARDS:** None  
**EXTINGUISHING MEDIA:** Foam, carbon dioxide, dry chemical, or water fog.  
**SPECIAL FIRE FIGHTING PROCEDURES:** Wear positive pressure, self-contained breathing apparatus and full protective clothing. Avoid smoke inhalation. Contain any liquid run off.

---

**STABILITY AND REACTIVITY**

---

**STABILITY:** Stable  
**CONDITIONS TO AVOID:** Do not mix with liquid fertilizers containing phosphates  
**INCOMPATIBILITY:** Not available  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Burning may result in formation of carbon monoxide and nitrate fumes  
**HAZARDOUS POLYMERIZATION:** Will not occur.

DATE OF ISSUE: 24<sup>TH</sup> DECEMBER 2007

**BARMAC INDUSTRIES PTY LTD  
BOX FLAT ESTATE SWANBANK RD. SWANBANK Q 4306  
MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BARMAC MANNI-TURF Mn**

**PHONE: (07) 3280 3000**

**EMERGENCY AFTER HOURS NUMBER: (07) 3280 3000**

---

**Classified as NON-HAZARDOUS by Worksafe Australia Criteria**

---

**ECOLOGICAL INFORMATION**

---

**ALGAL/LEMNA GROWTH INHIBITATION:** Not known

**TOXICITY TO FISH AND INVERTEBRATES:** Not known

**TOXICITY TO PLANTS:** Not known

**TOXICITY TO BIRDS:** Not known

---

**REGULATORY INFORMATION**

---

**CERCLA:** None

**SARA TITLE III, SECTION 313 TOXIC CHEMICALS:** Manganese compounds (5.0%)

---

NOTICE: Information for this product is believed to be reliable, however buyer and user assume all risk of use, handling and storage whether in accordance with directions or not. Barmac Industries Pty Ltd and its agents give no guarantee or warranty of any kind express or implied concerning the use of this product and will not accept any responsibility whatsoever whether in contract or tort for any loss including consequential loss arising out of the use of this product or caused by this product.

---