

## SECTION 1: IDENTIFICATION

### 1.1 Product Description

Product Name MATE

Active Ingredients	Seaweed Extract	16.00 %
	L-Amino acid	4.00 %
	Folic acid	0.33 %

Benefit Control of plant growth and development.

### 1.2 Manufacturer and Distributors

Distributors	<b>Sherwood Corporation (Thailand) Public Company Limited</b>
Address	1065 Srinakarin Road, Suanluang, Suanluang, Bangkok 10250, Thailand
Contact	Tel. (+66) 2320-2288 Fax. (+66) 2320-2670
Website	<a href="http://www.sherwood.co.th">http://www.sherwood.co.th</a>

### 1.3 Emergency telephone number

Emergency Contact Tel. (+66) 9-5957-4010

## SECTION 2: HAZARDS IDENTIFICATION

### POTENTIAL ACUTE HEALTH EFFECTS

Will cause irritation of the digestive tract if swallowed. May cause eye irritation.

### POTENTIAL CHRONIC HEALTH EFFECTS

CARCINOGENIC EFFECTS: NONE by ACGIH, EPA, IARC, NTP, OSHA.  
MUTAGENIC EFFECTS: NONE by ACGIH, EPA, IARC, NTP, OSHA.  
TERATOGENIC EFFECTS: NONE by ACGIH, EPA, IARC, NTP, OSHA.

## SECTION 3: INFORMATION ON INGREDIENTS

NAME	CAS #	Exposure Limits (ACGIH)						% by Weight
		TL V-TWA mg/m <sup>3</sup>	TL V-TWA ppm	STEL mg/m <sup>3</sup>	STEL ppm	CEIL mg/m <sup>3</sup>	CEIL ppm	
N-acetyl-4-thiazolidin carboxylic acid	5025-82-1							1.66
Folic acid	59-30-3							0.33
Ascophyllum nodosum extract like								16.00

### TOXICOLOGICAL DATA ON INGREDIENTS

N-acetyl-4-thiazolidin carboxylic acid

ORAL (LD50): Acute: 5000 mg/kg [Rat].



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Folic acid

ORAL (LD50): Acute: 2000 mg/kg [Rat].

### SECTION 4: FIRST AID MEASURES

<b>EYE CONTACT</b>	: Immediately flush eyes with water for at least 15 minutes. Use warm water if available. Get medical attention if irritation persists.
<b>MINOR SKIN CONTACT</b>	: After skin contact wash with running water.
<b>EXTENSIVE SKIN CONTACT</b>	: After skin contact wash immediately with plenty of water and non-abrasive soap.
<b>MINOR INHALATION</b>	: No medical attention needed.
<b>SEVERE INHALATION</b>	: Allow to rest in a well ventilated area.
<b>SLIGHT INGESTION</b>	: Irritating to the mouth, throat, stomach, digestive tract and bowels resulting in nausea, vomiting and diarrhea. Have affected person drink several glasses of water to assist in purging system. If the person is conscious, induce vomiting. Seek medical attention.
<b>EXTENSIVE INGESTION</b>	: No additional information.

### SECTION 5: FIRE FIGHTING MEASURES

<b>THE PRODUCT IS</b>	: Non-flammable.
<b>AUTO-IGNITION TEMPERATURE</b>	: Not applicable.
<b>FLASH POINT</b>	: Not applicable.
<b>FLAMMABILITY LIMITS</b>	: Not applicable.
<b>PRODUCTS OF COMBUSTION</b>	: Not applicable.
<b>FIRE HAZARD IN THE PRESENCE OF VARIOUS SUBSTANCES</b>	: Not applicable.
<b>EXPLOSION HAZARD IN THE PRESENCE OF VARIOUS SUBSTANCES</b>	: This substance is non-explosive.
<b>FIRE FIGHTING MEDIA AND INSTRUCTIONS</b>	: Material will not burn. As in any fire, wear MSHA/NIOSH approved pressure-demand self-contained breathing apparatus, or equivalent and full protective gear.
<b>SPECIAL REMARKS ON FIRE HAZARDS</b>	: A self contained breathing apparatus should be used to avoid inhalation of fumes.
<b>SPECIAL REMARKS ON EXPLOSION HAZARDS</b>	: No additional information.



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### SECTION 6: ACCIDENTAL RELEASE MEASURES

- SPILL**
- : Use appropriate tools or equipment to place the spilled liquid in a suitable container for reuse or disposal. Flush or wash the contaminated surface. Recover wash water and dispose of according to local and regional authority requirements.
  - : Stop leak if without risk.

### SECTION 7: HANDLING AND STORAGE

- PRECAUTIONS**
- : Avoid contact with skin and eyes. After handling, always wash hands thoroughly with soap and water.
- STORAGE**
- : Keep container tightly closed. Store in a dry, cool and well ventilated area. Keep away from food, drink and animal feeds. No direct sun light. Keep out of reach of children.

### SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

- ENGINEERING CONTROLS**
- : Use process enclosures, local exhaust ventilation.
- PERSONAL PROTECTION**
- : The selection of personal protective equipment varies, depending upon conditions of use. Under well controlled conditions where no direct contact with the substance exists and exposures are below the occupational exposure limit, normal work clothing may suffice. However, protective clothing and appropriate respiratory protection must be available in the area in the event of emergency. Wear appropriate respirator when ventilation is inadequate. Where skin and eye contact may occur as a result of brief periodic exposures, wear clothing with long sleeves, coveralls, chemical resistant gloves, impervious chemical resistant jacket and pants, and safety glasses with side shields. A respiratory protection program that meets OSHA 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant a respirator's use.
- PERSONAL PROTECTION IN**
- : No further information.
- CASE OF LARGE RELEASE**
- EXPOSURE LIMITS**
- : ACGIH TLV-TWA 5 mg/m<sup>3</sup>  
Fed OSHA Permissible Exposure Limit: Table Z-1 8-hr  
Time Weighted Avg: 15 mg/m<sup>3</sup>  
MI OSHA Permissible Exposure Limit: 10 mg/m<sup>3</sup>  
Federal, State and Provincial exposure limits may vary. Consult local officials for acceptable exposure limits in your jurisdiction.



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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>PHYSICAL STATE AND APPEARANCE</b>	Liquid
<b>COLOR</b>	Greenish
<b>ODOR</b>	Seaweed
<b>ODOR THRESHOLD</b>	Not available.
<b>TASTE</b>	Bitter
<b>MOLECULAR WEIGHT</b>	Not available.
<b>pH</b>	6.5 - 7.5
<b>BOILING POINT</b>	110 C
<b>MELTING POINT</b>	Not available.
<b>CRITICAL TEMPERATURE</b>	Not available.
<b>SPECIFIC GRAVITY g/cc</b>	1.01-1.02
<b>BULK DENSITY kg/m<sup>3</sup></b>	1010-1020 kg/m <sup>3</sup>
<b>VAPOR PRESSURE</b>	Not available.
<b>VAPOR DENSITY</b>	Not available.
<b>VOLATILITY</b>	Not available.
<b>SOLUBILITY</b>	Soluble in cold water and hot water.
<b>DISPERSION PROPERTIES</b>	Not available.
<b>WATER/OIL DIST. COEFF.</b>	Not available.

### SECTION 10: STABILITY AND REACTIVITY

<b>STABILITY</b>	: The product is stable.
<b>INSTABILITY TEMPERATURE</b>	: Not available.
<b>CONDITIONS OF INSTABILITY</b>	: No additional information.
<b>INCOMPATIBILITY WITH VARIOUS SUBSTANCES</b>	: The product is compatible to most agents.
<b>CORROSIVITY</b>	: Non-corrosive in presence of aluminum or 304 stainless steel. Non-corrosive in the presence of HDPE, PE, PVC.
<b>SPECIAL REMARKS ON REACTIVITY:</b>	No additional remark.
<b>SPECIAL REMARKS ON CORROSIVITY:</b>	No additional remark.



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### SECTION 11: TOXICOLOGICAL INFORMATION

<b>SIGNIFICANT ROUTES OF EXPOSURE</b>	: Eye contact. Ingestion.
<b>TOXICITY TO ANIMALS</b>	: See Section II.
<b>SPECIAL REMARKS ON TOXICITY TO ANIMALS</b>	: May be harmful to livestock and wildlife if ingested. Clean up all spilled material. The product itself and its products of degradation are not harmful.
<b>OTHER EFFECTS ON HUMANS</b>	: No additional information.
<b>SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS</b>	: No additional remark.
<b>SPECIAL REMARKS ON OTHER EFFECTS ON HUMANS</b>	: No additional remark.

### SECTION 12: ECOLOGICAL INFORMATION

<b>ECOTOXICITY</b>	: Low toxicity for humans or animals under normal conditions of use. May be harmful to livestock and wildlife if ingested. Clean up all spilled material.
<b>BOD and COD</b>	: Not available.
<b>PRODUCTS OF DEGRADATION</b>	: Possibly hazardous short term degradation products are not likely.
<b>TOXICITY OF THE PRODUCTS OF DEGRADATION</b>	: The products of degradation are less toxic than the product itself.
<b>SPECIAL REMARKS ON THE PRODUCTS OF DEGRADATION</b>	: No additional remark.
	Reclaiming material may not be a viable.

### SECTION 13: DISPOSAL CONSIDERATIONS

<b>WASTE DISPOSAL OR RECYCLING</b>	: Recover spilled material and use for intended purpose.
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### SECTION 14: TRANSPORT INFORMATION

<b>DOT / TDG CLASSIFICATION</b>	: Not controlled under TDG (Canada) or D.O.T. (U.S.A.)
<b>PIN and Shipping Name</b>	: Not applicable.
<b>SPECIAL PROVISIONS FOR TRANSPORT</b>	: No additional remark.

**DOT (U.S.A) (Pictograms)**



**SECTION 15: REGULATORY INFORMATION**

**OTHER REGULATIONS**

: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.

OTHER CLASSIFICATIONS	HCS (U.S.A.)	HCS: Irritating substance.
	DSCL (EEC)	R25- Toxic if swallowed. R36/37/38- Irritating to eyes.

**National Fire Protection Association (U.S.A.)**

: Hazards presented under acute emergency conditions only:



**TDG (Pictograms - Canada)**



**DSCL (Europe) (Pictograms)**

: Not Available  
No Disponible  
Pas Disponible

**ADR (Europe) (Pictograms)**

: Not Available  
No Disponible  
Pas Disponible

## **SECTION 16: OTHER INFORMATION**

### **REFERENCES**

- Transportation of Dangerous Goods Act and Clear Language Regulations, current revision.
- Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987  
Hazardous Products Act "Ingredient Disclosure List".
- Domestic Substances List, Canadian Environmental Protection Act.
- 29 CFR Part 1910
- 33 CFR Parts 151, 153, 154, 156
- 40 CFR Parts 1-799
- 46 CFR Part 153
- 49 CFR Parts 1-199
- American Conference of Governmental Industrial Hygienists, Threshold Limit Values for Chemical Substances, 2003.
- NFPA 704, National Fire Codes Online, National Fire Protection Association, current edition  
At time of MSDS preparation.
- Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers
- TOMES® System: Heitland G & Hurlbut KM (Eds) (electronic version): MICROMEDEX,  
Greenwood Village, Colorado, USA. Available at: <http://csi.micromedex.com> (2004). The  
TOMES® System includes MEDITEXT® Medical Management; HAZARDTEXT® Hazard  
Management; INFOTEXT® Documents; ERG2000 Emergency Response Guidebook  
Documents; REPROTEXT®: Heitland G & Hurlbut KM (Eds); CHRIS Hazardous Chemical  
Data:  
U.S.Department of Transportation, U.S . Coast Guard, Washington, D.C .(2004); HSDB:  
Hazardous Substances Data Bank. National Library of Medicine, Bethesda, Maryland  
(2004); IRIS : Integrated Risk Information System. U.S. Environmental Protection Agency,  
Washington, D.C. (2004); NIOSH: Pocket Guide to Chemical Hazards. National Institute for  
Occupational Safety and Health, Cincinnati, Ohio (2004); OHM/TADS : Oil and Hazardous  
Materials Technical Assistance Data System. U.S. Environmental Protection Agency,  
Washington, D.C . (2004); REPROTOX® : S cialli A.R. Georgetown University Medical  
Center and Reproductive Toxicology Center, Columbia Hospital for Women Medical Center,  
Washington, D.C . (2004); RTECS® : Registry of Toxic Effects of Chemical Substances.  
National Institute for Occupational Safety and Health, Cincinnati, Ohio (2004) ; and  
SHEPARDS : Shepard T.H. : Shepard's Catalog of Teratogenic Agents (2004).
- Michigan Office of Regulatory Reform R 325.51101et seq

### **OTHER SPECIAL CONSIDERATIONS**

No additional information.



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