

● **Materials Safety Data Sheet**

SECTION I

- ▶ Manufacturer : NTS Research&Inc. Canada
- ▶ Address : 9 Wildwood Dr. Portmoody
BC V3H 4M8 Canada
- ▶ Phone Number : 1-604-469-9284
- ▶ Fax Number : 1-604-469-9286

SECTION II - Classification

Name of products : M - 2000 (Concentrated mineral solution)

- ▶ Classification (Singular/Mixture) : Singular
- ▶ Chemical classification : Sulfate(complex, double salt) solution
of various minerals
- ▶ Ingredients and content (g/l)

Fe : 2.41 as $\text{Fe}_2(\text{SO}_4)_3$

Al : 2.24 as $\text{Al}_2(\text{SO}_4)_3$

Mg : 2.1 as MgSO_4

K : 0.9 as K_2SO_4

Other minerals (refer to analysis data)

SECTION III- Classification of dangerousness and harmfulness

- ▶ Classification : Acid concentrated minerals solution
- ▶ Dangerousness : Not caustic to human skin
- ▶ Harmfulness : Not harmful, because it does not contain any harmful heavy metal
- ▶ Environmental influence : It does not affect any natural ecosystems ,because it is a water purifying agent.
It is proven with a killifish experiment

SECTION IV

- ▶ First aid
 - In case of eye contamination : Flush with clean water
 - In case of skin contamination : Flush with clean water
 - In case of inhaling : First aid is not needed
 - In case of swallowing : Diluted by drinking water or milk
- ▶ Measures for fire : Unnecessary it is not inflammable
- ▶ Treatment after leakage : Neutralize with lime or other alkalies
- ▶ Handling and storage : Handle it with acidproof tools such as plastic or stainless steel.
The workers should wear acidproof Clothes and gloves.
The products should be stored in acidproof

containers such as plastics. Because sunshine makes plastics fragile, keep them out of sunshine.

SECTION V - Physical / Chemical property

- ▶ Appearance : Pale brown liquid
- ▶ Specific gravity : 1.14
- ▶ pH : 0.5 ~ 1.0
- ▶ Boiling point : 100 °C
- ▶ Melting point : -10 °C
- ▶ Solubility (water) : 100% (at 10°C)

SECTION VI - Dangerousness data

- ▶ Flash point : Nil
- ▶ Inflammability : Nil
- ▶ Oxidativity : Nil
- ▶ Explosiveness : Nil
- ▶ Dust explosiveness : Nil

SECTION VII - Harmfulness data

- ▶ Causticity to skin : Nil
- ▶ Stimulativity : Stimulus to injured skin
- ▶ Sensitivity : Nil
- ▶ Acute poisonousness : Nil
- ▶ Semi-acute poisonousness : Nil

- ▶ Chronic poisonousness : Nil
- ▶ Carcinogenicity : Nil
- ▶ Mutagenicity : Nil
- ▶ Reproduction poisonousness : Nil
- ▶ Deformation inductivity : Nil

SECTION VIII – Environmental data

- ▶ Resolvability : Nil
- ▶ Accumulability : Nil
- ▶ Poisonousness to fish : Nil
- ▶ Caution : Because it is acid, abandon after neutralization

SECTION IX – Ingredients analysis data

Ingredients	M - 2000	Ingredients	M - 2000
Calcium (Ca)	530 mg/l	Copper (Cu)	4.6
Phosphate (P)	249	Cobalt (Co)	4.2
Magnesium (Mg)	4290	Nickel (Ni)	3.2
Potassium (K)	1950	Molybden (Mo)	0.2
Sodium (Na)	95	Lithium (Li)	4.8
Selenium (Se)	1.8	Vanadium (V)	22
Silicon (Si)	47	Tungsten (W)	0.9
Germanium (Ge)	0.55	Barium (Ba)	0.01
Zinc (Zn)	21.9	Titanium (Ti)	890
Manganese (Mn)	195	Aluminium (Al)	5493
Iron (Fe)	6011	Rubium (Rb)	1.95
analysis method : (Si) Molybdenum blue absorption light intensity of lightness method (the other) ICP absorption light spectrum method or intensity of lightness method			