



SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS REVISION 5, OSHA 29CFR 1910.1200

Section 1: Chemical Product and Company Identification

MANUFACTURER'S NAME
The McGregor Company
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DATE PREPARED: November 14, 2017

REVISION DATE: March 23, 2018

PRODUCT NAME: **TMC Seed Start Root²**
FORMULA: Preparation/Mixture
PRODUCT USE: Seed treatment

Section 2: Hazards Identification



GHS Hazard Class

Acute Toxicity (Oral) – Category 4
Serious eye damage/irritation – Category 2B
Hazardous to the aquatic environment (Acute) – Category 1
Hazardous to the aquatic environment (Long-term) – Category 1

Signal word:
Hazard Statement:

Danger
H302: Harmful if swallowed
H316: Causes mild skin irritation
H320: Causes eye irritation
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statements: Prevention

P260: Do not breathe dust
P264: Wash hands thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P281: Use personal protective equipment as required
P273: Avoid release to the environment

Response

P301+P312+P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth
P302+P352: IF ON SKIN: Wash with plenty of water for at least 15 mins. Get medical advice if irritation persists

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contacts if present and easy to do. Continue rinsing

P312: Call a POISON CENTER/doctor if you feel unwell

P391: Collect spillage

Storage

P405: Store locked up

Disposal

P501: Dispose of contents/container in accordance with waste disposal requirements of your country, state, or local authorities

Hazards not otherwise classified (HNOC) or not covered by GHS - None

HAZARD CLASSIFICATION:

Not classified as hazardous based on IATA, IMDG, and DOT.

FIRE AND EXPLOSION:

Not considered flammable or combustible, but this product will burn if involved in a fire. Emits toxic fumes when burned.

POTENTIAL HEALTH EFFECTS:

<1 % of mixture consists of ingredients of unknown acute toxicity

APPEARANCE:

Light blue liquid

NFPA Rating:

Component	Health (Blue)	Flammability (Red)	Reactivity (Yellow)	Special (White)
Seed Start	2	0	0	----



Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPROX %	CAS NO.	EC NUMBER	CANADA DSL
Zinc Oxide	<40	1314-13-2	215-222-5	Y
Kelp (Ecklonia maxima)	<5	--	--	N
Manganese Carbonate	<5	598-62-9	209-942-9	Y
Iron (III) Oxide	<5	1309-37-1	215-168-2	Y
Copper Oxychloride	<5	1332-65-6	215-572-9	Y

Some items on this SDS may be designated as trade secrets (TS). Bonafide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13.

Section 4: First Aid Measures

Description of First Aid Measures

Inhalation	Remove to fresh air. If not breathing, provide CPR (cardio pulmonary resuscitation). If breathing is difficult, give oxygen. Get medical attention if symptoms arise or persist.
Skin Contact	Wash skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing. Not expected to require first aid measures.
Eye Contact	Flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention if irritation develops or persists.
Ingestion	Do NOT induce vomiting. Never give anything to an unconscious person. Get medical attention if symptoms arise or persist, especially if abdominal discomfort occurs.

Most important symptoms and effects, both acute and delayed

Symptoms/Injuries after Inhalation	May cause respiratory tract irritation.
Symptoms/Injuries after Skin Contact	May cause skin irritation. Symptoms may include redness, drying, defatting, and cracking of the skin.
Symptoms/Injuries after Eye Contact	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/Injuries after Ingestion	May be harmful if swallowed. Effects may include abdominal discomfort.

Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately.

Section 5: Fire-fighting Measures

Suitable extinguishing media	Use alcohol-resistant foam, dry chemical, carbon dioxide for small fires. Water spray or fog can be used for larger fire or cooling of unaffected stock.
Special hazards arising from the substance or mixture	No information available.
Protective actions fire-fighters	Wear standard protective equipment and self contained breathing apparatus for firefighting if necessary.
Further information	Fire may produce irritating or poisonous vapors, mists or other products.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear proper personal protective equipment. Avoid breathing mist or vapors.

Environmental precautions

Prevent further spillage if safe to do so. Prevent spills or contaminated rinse water from entering sewers or watercourses.

Methods and materials for containment and cleaning up

In case of small spills, absorb with sand or other inert absorbent material and put in a suitable container for reclamation or disposal. Dispose of according to the requirements of your country, state, or local authorities.

In case of large spills, dike far ahead of spill then treat area as for small spills. Dispose of according to the requirements of your country, state, or local authorities.

Reference to other Sections For personal protection reference section 8. For disposal reference section 13.



Section 7: Handling and Storage

Precautions for safe handling

- Use only with adequate ventilation.
- Keep out of reach of children.
- Wear proper protective equipment when handling this material.
- Avoid contact with skin, eyes, or clothing.
- Wash hands and face after handling this material.
- A plastic container should be used for disposal.
- For precautions see section 2.

Conditions for safe storage, including any incompatibilities

- Store upright in a cool, dry place, away from heat, sparks and other sources of ignition.
- Keep container closed when not in use.
- Decomposition may occur at temperatures greater than 225°F (107°C)
- Do not store with acids and strong oxidizers.
- Utilize chemical segregation.
- Follow all applicable local regulations for handling and storage.

Specific uses

- Seed treatment

Section 8: Exposure Controls/Personal Protection

Control Parameters

PRODUCT COMPOSITION	ACGIH TLV	OSHA PEL	NIOSH REL
Zinc Oxide	5 mg/m ³		
Manganese Carbonate (All Mn compounds)	5 mg/m ³	5 mg/m ³	--
Iron (III) Oxide	5 mg/m ³	10 mg/m ³	5 mg/m ³
Copper Oxychloride	1 mg/m ³		

NIOSH-- No Occupational exposure values

Exposure controls

VENTILATION:

Always provide good general, mechanical room ventilation where this chemical/material is used.

SPECIAL VENTILATION CONTROLS:

None

RESPIRATORY PROTECTION:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or the CEN European Standards (EU). Use a NIOSH/MSHA or European Standard (EN) approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

PROTECTIVE GLOVES:

Neoprene, butyl, or nitrile rubber gloves are recommended.

EYE PROTECTION:

Recommend eye protection using safety glasses or goggles.

SKIN PROTECTION:

Suitable protective clothing to prevent skin contact

WORK/HYGIENE PRACTICES:

Avoid breathing mist and vapors. Avoid contact with eyes. Wash hands after handling.

OTHER EQUIPMENT:

Make safety shower, eyewash stations, and hand washing equipment available in the work area.



Section 9: Physical and Chemical Properties

	PRODUCT CRITERIA
APPEARANCE - COLOR:	Dark Pink
PHYSICAL STATE:	Liquid
ODOR:	No data available
ODOR THRESHOLD	No data available
PH	No data available
MELTING POINT/FREEZING POINT:	No data available
INITIAL BOILING POINT AND BOILING RANGE:	No data available
FLASH POINT:	No data available
EVAPORATION RATE:	No data available
FLAMMABILITY (Solid, gas)	Not flammable
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	Not Measured
VAPOR PRESSURE	No data available
VAPOR DENSITY (AIR = 1)	No data available
SPECIFIC GRAVITY (@25 °C):	1.66
SOLUBILITY(IES)	No data available
OXIDIZING PROPERTIES	No data available
PARTITION COEFFICIENT: n-octanol/water	No data available
AUTO IGNITION TEMPERATURE	No data available
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY	No data available

Section 10: Stability and Reactivity

Reactivity:	Not reactive
Chemical Stability:	Stable under recommended conditions.
Possibility of Hazardous Reactions:	Will not occur under normal temperatures and pressures.
Conditions to Avoid:	Excess heat and incompatible materials.
Incompatibility (Materials to avoid):	Strong oxidizing agents.
Hazardous Decomposition Products:	Potentially harmful or irritating fumes.

Section 11: Toxicological Information

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comments	Chemical Constituent
Acute Toxicity	LD50(Oral/Rat):	> 5000 mg/kg		Zinc Oxide
	LD50(Oral/Rat):	> 2000 mg/kg		Manganese Carbonate
	LD50(Oral/Rat):	833 mg/kg	Category 4	Copper Oxychloride
	LD50(Oral/Rat):	10g/kg		Iron (III) Oxide
Skin Corrosion/Irritation	May cause irritation			Manganese Carbonate
	May cause irritation			Manganese Carbonate
Respiratory or Skin Sensitization				
Germ Cell Mutagenicity	NTP		Not listed	
Carcinogenicity	IARC	Not listed		
	OSHA	Not listed		
	Data not available			
Reproductive Toxicity				
STOT -- Single Exposure				
STOT -- Repeated Exposure	Data not available			
Aspiration Hazard				

STOT = Specific Target Organ Toxicity

Section 12: Ecological Information

	Chemical Constituent
Toxicity:	Acute EC50 0.413mg/L 48hr Ceriodaphnia dubia
	Acute LC50 1.136mg/L 72hr Selenastrum capricornutum
	LC50 2940mg/L 96hr Cyprinus carpio
Persistence and degradability:	No Data Available
Bioaccumulative potential	No Data Available
Mobility in soil:	No Data Available
PBT and vPvB assessment:	PBT/vPvB assessment not available as chemical assessment not required/not conducted
Other adverse effects:	No Data Available



Section 13: Disposal Considerations

Waste from residues/unused products: Follow the waste disposal requirements of your country, state, or local authorities.

Contaminated packaging: Contaminated packaging material should be disposed of as stated above for residues and unused product.

Rinsate: Do not dispose of rinse water containing product in a sanitary sewer system or stormwater drainage system.

Section 14: Transport Information

DOT TRANSPORT:		Not Regulated
ADR = International Carriage of Dangerous Goods by Road		Not Regulated
SEA TRANSPORT:	IMDG	Not Regulated
AIR TRANSPORT:	IATA/ICAO	Not Regulated

Section 15: Regulatory Information

TOXIC SUBSTANCE CONTROL ACT (TSCA) STATUS:

This product is in compliance with rules, regulations, and orders of TSCA. All components are either listed on the TSCA inventory or are considered exempt.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all SDS's that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: None

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.

The California proposition 65 chemical(s) contained in this product are: None

STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:

Massachusetts' hazardous substance(s):	Zinc Oxide
New Jersey	Copper Oxichloride, Zinc Oxide
Pennsylvania	Copper Oxichloride, Zinc Oxide

CANADA:

WHMIS-2015: This SDS is in compliance with WHMIS 2015 (HPR / new HPA).

EUROPEAN UNION:

This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Regulation (EC) No 1272/2008 on classification, labeling, and packaging (CLP) of substances and mixtures.

Section 16: Other Information

Initial issue date:	November 14, 2017
Final revision date:	March 23, 2018
Revision Number:	1
Revision explanation	Initial version
Revision explanation	Updated hazard statements, toxicity rates, exposure limits, ecological data, and physical properties.
Information Sources:	RTECS, ECHA, REACH, OSHA 29CFR 1910.1200

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