

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
 Product group : Trade product
 Registration : 2013040B Fertilizers Act

1.2. Recommended use and restrictions on use

Recommended uses and restrictions : Fertilizers

1.3. Supplier

Alltech Crop Science
 3031 Catnip Hill Road
 40356 Nicholasville - USA
 T 859-885-9613 - F 859-887-6736
RegulatoryACS@alltech.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Acute toxicity (oral), Category 4 H302

Skin corrosion/irritation, Category 2 H315

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA) :



GHS07

Signal word (GHS-CA) :

Warning

Contains :

Ferrous sulfate, heptahydrate; Copper Sulfate; Zinc sulfate; Manganese sulfate, monohydrate

Hazard statements (GHS-CA) :

H302 - Harmful if swallowed
 H315 - Causes skin irritation

Precautionary statements (GHS-CA) :

P264 - Wash hands, forearms and face thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
 P302+P352 - IF ON SKIN: Wash with plenty of water
 P321 - Specific treatment (see ... on this label)
 P330 - Rinse mouth
 P332+P313 - If skin irritation occurs: Get medical advice/attention
 P362+P364 - Take off contaminated clothing and wash it before reuse
 P501 - Dispose of contents/container to ..

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Soil-Set

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Name	Product identifier	%	Classification (GHS-CA)
LACTOBACILLUS EXTRACT FILTRATE		50 - 80	Not classified
Ferrous sulfate, heptahydrate	(CAS No) 7782-63-0	5 - 10	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315
Copper Sulfate	(CAS No) 7758-99-8	5 - 10	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Zinc sulfate	(CAS No) 7733-02-0	5 - 10	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
YUCCA SCHIDIGERA STEM EXTRACT	(CAS No) 223749-05-1	2.5 - 5	Not classified
Manganese sulfate, monohydrate	(CAS No) 10034-96-5	2.5 - 5	STOT RE 2, H373 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/injuries after skin contact : Irritation.
- Symptoms/injuries after eye contact : Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

- Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Unsuitable extinguishing media

No additional information available

5.3. Specific hazards arising from the hazardous product

- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.4. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.2. Methods and materials for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.

Soil-Set

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures/Personal protective equipment

Hand protection : Protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls : Avoid release to the aquatic environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : No data available

Colour : No data available

Odour : No data available

Odour threshold : No data available

pH : No data available

pH solution : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Relative evaporation rate (ether=1) : No data available

Melting point : Not applicable

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : > 100 °C

Decomposition temperature : No data available

Flammability (solid, gas) : Not applicable

Vapour pressure : No data available

Vapour pressure at 50 °C : No data available

Relative vapour density at 20 °C : No data available

Relative density : No data available

Relative density of saturated gas/air mixture : No data available

Density : 1.27 g/ml

Relative gas density : No data available

Solubility : No data available

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : 4.9 cSt

Viscosity, kinematic (calculated value) (40 °C) : 4.9 mm²/s

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

Lower explosive limit (LEL) : No data available

Upper explosive limit (UEL) : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.

Soil-Set

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Conditions to avoid : None under recommended storage and handling conditions (see section 7).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Oral: Harmful if swallowed.
Acute toxicity (dermal) : Dermal: Not classified.
Acute toxicity (inhalation) : Not classified

Soil-Set	
LD50 oral rat	1027 mg/kg
LD50 dermal rat	5000 mg/kg
LC50 inhalation rat (mg/l)	<
LC50 inhalation rat (ppm)	2.11 ppm
ATE CA (oral)	1027.00000000 mg/kg bodyweight
ATE CA (dermal)	5000.00000000 mg/kg bodyweight

LACTOBACILLUS EXTRACT FILTRATE	
LD50 oral rat	> 5000 ml/kg
LD50 dermal rat	> 5000 mg/kg
LC50 inhalation rat (ppm)	2.05 ppm

Ferrous sulfate, heptahydrate (7782-63-0)	
LD50 oral rat	1480 mg/kg (Rat)

Copper Sulfate (7758-99-8)	
LD50 oral rat	300 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 482 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity)

Zinc sulfate (7733-02-0)	
LD50 oral rat	1000 - 2000 mg/kg (Rat)

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified
Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified.

Soil-Set	
Viscosity, kinematic (calculated value) (40 °C)	4.9 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Ferrous sulfate, heptahydrate (7782-63-0)	
LC50 fish 1	925 mg/l (LC50; 96 h; Poecilia reticulata)
EC50 Daphnia 2	152 mg/l (EC50; 48 h)

Zinc sulfate (7733-02-0)	
EC50 Daphnia 1	280 µg/l (LC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

Manganese sulfate, monohydrate (10034-96-5)	
LC50 fish 2	33.8 mg/l (LC50; 96 h)
EC50 Daphnia 1	8.28 mg/l (EC50; 48 h)

12.2. Persistence and degradability

Soil-Set

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Ferrous sulfate, heptahydrate (7782-63-0)	
Persistence and degradability	Biodegradability in water: no data available. Biodegradability in soil: no data available. Adsorbs into the soil.
Copper Sulfate (7758-99-8)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Zinc sulfate (7733-02-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Manganese sulfate, monohydrate (10034-96-5)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

Ferrous sulfate, heptahydrate (7782-63-0)	
Bioaccumulative potential	Not bioaccumulative.
Copper Sulfate (7758-99-8)	
Bioaccumulative potential	Bioaccumable.
Zinc sulfate (7733-02-0)	
BCF fish 1	59 - 242 (BCF)
Bioaccumulative potential	Bioaccumable.

12.4. Mobility in soil

Copper Sulfate (7758-99-8)	
Ecology - soil	Toxic to flora.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

No additional information available

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

TDG

Not regulated for transport

DOT

DOT NA no. : UN3082
UN-No.(DOT) : 3082
Packing group (DOT) : III - Minor Danger
DOT Symbols : G - Identifies PSN requiring a technical name

Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s. (Contains copper sulfate, manganese sulfate and zinc sulfate), 9, III

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s.
Contains copper sulfate, manganese sulfate and zinc sulfate

Contains Statement Field Selection (DOT) :

Soil-Set

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Division (DOT) : 9
Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Dangerous for the environment : No

DOT Special Provisions (49 CFR 172.102) : 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies
146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination
173 - An appropriate generic entry may be used for this material
335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leakproof when used as bulk packaging
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling
TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP

DOT Packaging Exceptions (49 CFR 173.xxx) : 155

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : No limit

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : No limit

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel

Emergency Response Guide (ERG) Number : 171

Other information : No supplementary information available.

14.3. Air and sea transport

IMDG

UN-No. (IMDG) : 3082

Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class (IMDG) : 9 - Miscellaneous dangerous substances and articles

Packing group (IMDG) : III - substances presenting low danger

Soil-Set

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Limited quantities (IMDG) : Shipping information on Soil-Set Aid. Per the IMDG code: (2.10.2.7) environmentally hazardous substances of 5L or less in a container is shipped as a non-hazardous material and will not be labeled or packaged as hazardous. The transport of marine pollutants is not subject to any other provisions of the IMDG code relevant to marine pollutants (no marking, labelling or documentation required) provided: The net mass or net quantity per single packaging or inner packaging of combination packagings does not exceed 5 kg for solids and 5 L for liquids; The packagings meet the general provisions of paragraphs 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 of the IMDG code (strong rigid packaging). In the case of marine pollutants also meeting the criteria for inclusion in another hazard class all provisions of the IMDG code relevant to any additional hazards continue to apply.

This means that: UN 3077 Environmentally hazardous substances solid n.o.s. in quantities of less than 5 kg per single packaging or inner packaging of combination packaging; and • UN 3082 Environmentally hazardous substances liquid, n.o.s. in quantities of less than 5 L per single packaging or inner packaging of combination packaging can be shipped as not subject to the provisions of the IMDG code. For marine pollutants, which also have other hazards, no marine pollutant mark is required on the packages or on the container in which they are packed, but all other provisions of the IMDG code continue to apply. Because of this change, containers with dangerous goods in limited quantities which are also marine pollutants do not need to bear the Marine Pollutant mark.

IATA

UN-No. (IATA) : 3082
Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class (IATA) : 9 - Miscellaneous Dangerous Goods
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. National regulations

No additional information available

15.2. International regulations

LACTOBACILLUS EXTRACT FILTRATE

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Ferrous sulfate, heptahydrate (7782-63-0)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Copper Sulfate (7758-99-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Zinc sulfate (7733-02-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

YUCCA SCHIDIGERA STEM EXTRACT (223749-05-1)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Manganese sulfate, monohydrate (10034-96-5)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: Other information

Date of issue : 22/04/2016
Revision date : 22/04/2016
Supersedes : 07/07/2012

Full text of H-statements:

H301	Toxic if swallowed
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

SDS Canada (GHS)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product