

SAFETY DATA SHEET



1. Identification

Product identifier TILL-IT Hi-Z Multi Micro Mix
Other means of identification None.
Recommended use Ag Product - Plant Nutrition
Recommended restrictions None known.
Manufacturer/Importer/Supplier/Distributor information
Manufacturer
Company name Wilbur-Ellis Company LLC
Address 16300 Christensen Rd. Ste 135
Tukwila, WA 98188
United States
Telephone Branded Products Information (800) 500-1698
E-mail SDS@wilburellis.com
Emergency phone number Chemtrec - Domestic (800) 424-9300
Chemtrec - International +1 703-741-5970

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.
Label elements
Hazard symbol None.
Signal word None.
Hazard statement The mixture does not meet the criteria for classification.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Store away from incompatible materials.
Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
EDTA Acid		60-00-4	20 - < 30
Zinc Oxide		1314-13-2	5 - < 10
Copper Complex With Ammonia And Ethylene Diamine Tetraacetate		67989-88-2	3 - < 5
Ammonia		7664-41-7	1 - < 3
Manganese Oxide		1313-13-9	1 - < 3
Potassium Hydroxide		1310-58-3	1 - < 3
Other components below reportable levels			60 - < 70

Percentage ranges of composition to protect confidentiality or due to batch variation. This product is a neutralized solution of the ingredients listed above, and other non-hazardous or below reportable threshold ingredients.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with inert absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Ammonia (CAS 7664-41-7)	PEL	35 mg/m ³ 50 ppm	
Manganese Oxide (CAS 1313-13-9)	Ceiling	5 mg/m ³	
Zinc Oxide (CAS 1314-13-2)	PEL	5 mg/m ³ 5 mg/m ³ 15 mg/m ³	Respirable fraction. Fume. Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ammonia (CAS 7664-41-7)	STEL	35 ppm	
	TWA	25 ppm	
Copper Complex With Ammonia And Ethylene Diamine Tetraacetate (CAS 67989-88-2)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Manganese Oxide (CAS 1313-13-9)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Potassium Hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m3	
Zinc Oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Ammonia (CAS 7664-41-7)	STEL	27 mg/m3	
		35 ppm	
	TWA	18 mg/m3	
Copper Complex With Ammonia And Ethylene Diamine Tetraacetate (CAS 67989-88-2)	TWA	25 ppm	
		1 mg/m3	Dust and mist.
Manganese Oxide (CAS 1313-13-9)	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
Potassium Hydroxide (CAS 1310-58-3)	TWA	2 mg/m3	
Zinc Oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves.

Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Blue liquid.

Physical state

Liquid.

Form

Liquid.

Color

Blue.

Odor

Not available.

Odor threshold	Not available.
pH	6.8 - 8
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	10.10 lb/gal
Specific gravity	1.21

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Ammonia (CAS 7664-41-7)		
Acute		
Inhalation		
<i>Vapor</i>		
LC50	Mouse	4230 ppm, 1 Hours
LC50	Rat	19590 mg/l
		18693 mg/m ³ , 5 Minutes
		11590 mg/m ³
Oral		
LD50	Rat	350 mg/kg
Copper Complex With Ammonia And Ethylene Diamine Tetraacetate (CAS 67989-88-2)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
<i>Aerosol</i>		
LC50	Rat	> 5.32 mg/l, 4 Hours
Oral		
LD50	Rat	300 - 2000 mg/kg
EDTA Acid (CAS 60-00-4)		
Acute		
Oral		
LD50	Rat	4500 mg/kg
Potassium Hydroxide (CAS 1310-58-3)		
Acute		
Oral		
LD50	Rat	388 mg/kg
Zinc Oxide (CAS 1314-13-2)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Mouse	> 5.7 mg/l, 4 Hours
		2500 mg/m ³
	Rat	> 5700 mg/m ³ , 4 Hours
Oral		
LD50	Mouse	> 5000 mg/kg
	Rat	> 15000 mg/kg
		> 5000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings, if applicable, even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

General information IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonia (CAS 7664-41-7) Listed.

Copper Complex With Ammonia And Ethylene Diamine Listed.

Tetraacetate (CAS 67989-88-2)

EDTA Acid (CAS 60-00-4)	Listed.
Manganese Oxide (CAS 1313-13-9)	Listed.
Potassium Hydroxide (CAS 1310-58-3)	Listed.
Zinc Oxide (CAS 1314-13-2)	Listed.

SARA 304 Emergency release notification

Ammonia (CAS 7664-41-7) 100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Ammonia	7664-41-7	100	500		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
ZINC COMPOUNDS	1314-13-2	5 - < 10
COPPER COMPOUNDS (WITH EXCEPTIONS)	67989-88-2	3 - < 5
AMMONIA (INCLUDES ANHYDROUS AMMONIA AND AQUEOUS AMMONIA FROM WATER DISSOCIABLE AMMONIUM SALTS AND OTHER SOURCES; 10% OF TOTAL AQUEOUS AMMONIA IS REPORTABLE UNDER THIS LISTING)	7664-41-7	1 - < 3
MANGANESE COMPOUNDS	1313-13-9	1 - < 3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Manganese Oxide (CAS 1313-13-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Ammonia (CAS 7664-41-7)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Ammonia (CAS 7664-41-7)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

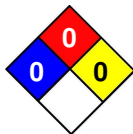
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-23-2016
Revision date 09-26-2017
Version # 02
NFPA ratings Health: 0
Flammability: 0
Instability: 0

NFPA ratings



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