

# Safety Data Sheet

Issue Date: 19-Aug-2016

Revision Date: 14-Feb-2017

Version 1

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Avail HV

### Other means of identification

**SDS #** VLS-179R

### Recommended use of the chemical and restrictions on use

**Recommended Use** Fertilizer.

### Details of the supplier of the safety data sheet

#### **Supplier Address**

Verdesian Life Sciences, U.S., LLC.  
1001 Winstead Drive, Suite 480  
Cary, NC 27513

### Emergency Telephone Number

**Company Phone Number** Business Phone: (800) 868-6446

Fax: (919) 535-3652

**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)

1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Tan to brown liquid

**Physical state** Liquid

**Odor** Characteristic

### Classification

Skin sensitization

Category 1

### Signal Word

Warning

### Hazard statements

May cause an allergic skin reaction



### Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray  
Contaminated work clothing must not be allowed out of the workplace  
Wear protective gloves

### Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water  
If skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Please also refer to subsequent sections of this SDS for additional information regarding the components of this product.

**Chemical Family** Carboxylated polymer.

Chemical Name	CAS No.	Weight-%
Maleic-itaconic copolymer, partial ammonium salt	701908-99-8	Proprietary

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

Mixture also contains:  
 Mercury (Hg) 0.05 ppm  
 Zinc (Zn) 10 ppm  
 Selenium (Se) 10 ppm  
 Lead (Pb) 5 ppm  
 Nickel (Ni) 10 ppm  
 Molybendum (Mb) 10 ppm  
 Colbalt (Co) 10 ppm  
 Cadmium (Cd) 0.05 ppm  
 Arsenic (As) 10 ppm.

**4. FIRST AID MEASURES****First Aid Measures**

<b>General Advice</b>	Provide this SDS to medical personnel for treatment.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Take off contaminated clothing. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen & get medical attention immediately.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting without medical advice. If conscious give 2 glasses of water to dilute. Get medical attention.

**Most important symptoms and effects**

**Symptoms** Will cause gastrointestinal tract irritation. May cause an allergic skin reaction.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Water spray, dry chemical, carbon dioxide, foam.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Toxic fumes may be given off when material is exposed to fire.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so. Soak up and contain spill with an absorbent material.

**Methods for Clean-Up** Sweep up and shovel into suitable containers for disposal. For waste disposal, see section 13 of the SDS.

**7. HANDLING AND STORAGE****Precautions for safe handling**

**Advice on Safe Handling** Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Avoid contact with skin, eyes or clothing. Wash face, hands and any exposed skin thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.

**Incompatible Materials** Strong oxidizing agents. Strong reducing agents. Materials incompatible with water. Materials incompatible with ammonium salts.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** No exposure limits noted for ingredient(s). The following information is given as general guidance

**Appropriate engineering controls**

**Engineering Controls** Maintain eye wash fountain and quick-drench facilities in work area. Ensure adequate ventilation, especially in confined areas.

**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Use chemical safety goggles / face shield. Refer to 29 CFR 1910.133 for eye and face protection regulations.
<b>Skin and Body Protection</b>	Chemical resistant protective gloves. Refer to 29 CFR 1910.138 for appropriate skin and body protection.
<b>Respiratory Protection</b>	If necessary, wear a MSHA/NIOSH-approved respirator. Refer to 29 CFR 1910.134 for respiratory protection requirements.
<b>General Hygiene Considerations</b>	Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid	<b>Odor</b>	Characteristic
<b>Appearance</b>	Tan to brown liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Tan to brown		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
<b>pH</b>	5.0-5.5		
<b>Melting Point/Freezing Point</b>	-7.22 °C / 19 °F		
<b>Boiling Point/Boiling Range</b>	Not determined		
<b>Flash Point</b>	None		
<b>Evaporation Rate</b>	Not determined		
<b>Flammability (Solid, Gas)</b>	n/a-liquid		
<b>Flammability Limits in Air</b>			
<b>Upper Flammability Limits</b>	Not determined		
<b>Lower Flammability Limit</b>	Not determined		
<b>Vapor Pressure</b>	Not determined		
<b>Vapor Density</b>	Not determined		
<b>Relative Density</b>	1.2 g/mL		
<b>Water Solubility</b>	Not determined		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Auto-ignition Temperature</b>	Not determined		
<b>Decomposition Temperature</b>	Not determined		
<b>Kinematic Viscosity</b>	Not determined		
<b>Dynamic Viscosity</b>	<50 cP		
<b>Explosive Properties</b>	Not determined		
<b>Oxidizing Properties</b>	Not determined		

**10. STABILITY AND REACTIVITY****Reactivity**

Not reactive under normal conditions.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

Exposure to excessively high pH may lead to ammonia gas evolution. Can react with metals to give off hydrogen, heat and/or steam. Can react with bases and metal oxides with high evolution of heat and/or steam. Can react with carbonates to give off carbon dioxide, heat and/or steam.

**Conditions to Avoid**

Incompatible Materials.

**Incompatible Materials**

Strong oxidizing agents. Strong reducing agents. Materials incompatible with water. Materials incompatible with ammonium salts.

**Hazardous Decomposition Products**

Carbon oxides. Nitrogen oxides (NOx).

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

<b>Product Information</b>	To the best of our knowledge, the chemical, physical and toxicological properties of this material have not been thoroughly investigated
<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	May cause an allergic skin reaction. May cause temporary irritation on skin contact.
<b>Inhalation</b>	May cause irritation to the mucous membranes and upper respiratory tract.
<b>Ingestion</b>	Can cause gastrointestinal disturbance.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1,2 Propanediol 57-55-6	= 20 g/kg ( Rat )	= 20800 mg/kg ( Rabbit )	-
Itaconic Acid 97-65-4	= 2969 mg/kg ( Rat )	-	-
Maleic acid 110-16-7	= 708 mg/kg ( Rat )	= 1560 mg/kg ( Rabbit )	> 720 mg/m <sup>3</sup> ( Rat ) 1 h

**Information on physical, chemical and toxicological effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** May cause an allergic skin reaction.

**Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
1,2 Propanediol 57-55-6	19000: 96 h Pseudokirchneriella subcapitata mg/L EC50	710: 96 h Pimephales promelas mg/L LC50 51600: 96 h Oncorhynchus mykiss mg/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 41 - 47: 96 h Oncorhynchus mykiss mL/L LC50 static	1000: 48 h Daphnia magna mg/L EC50 Static 10000: 24 h Daphnia magna mg/L EC50

Maleic acid 110-16-7		5: 96 h Pimephales promelas mg/L LC50 static	250 - 400: 48 h Daphnia magna mg/L EC50
Itaconic Acid 97-65-4	47: 72 h Desmodemus subspicatus mg/L EC50	190: 24 h Salmo gairdneri mg/L LC50 static	240: 24 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Maleic acid 110-16-7	-0.79 - 0.32
Itaconic Acid 97-65-4	-0.4

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION****Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINC S	ENCS	IECSC	KECL	PICCS	AICS
Maleic-itaconic copolymer, partial ammonium salt	X	X						
1,2 Propanediol	X	X	X	Present	X	Present	X	X
Maleic acid	X	X	X	Present	X	Present	X	X
Itaconic Acid	X	X	X	Present	X	Present	X	X

**Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINC S - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*
- AICS - Australian Inventory of Chemical Substances*

**US Federal Regulations**

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Maleic acid 110-16-7	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Maleic acid	5000 lb			X

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
1,2 Propanediol 57-55-6	X		X
Maleic acid 110-16-7	X	X	X

**16. OTHER INFORMATION****NFPA****Health Hazards****Flammability****Instability****Special Hazards**

Not determined

Not determined

Not determined

Not determined

**HMIS****Health Hazards****Flammability****Physical hazards****Personal Protection**

Not determined

Not determined

Not determined

Not determined

**Issue Date:** 19-Aug-2016  
**Revision Date:** 14-Feb-2017  
**Revision Note:** New formula

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**