

**AV-550 SOIL STRENGTHENER™****SECTION 1. IDENTIFICATION**

<b>Product Identifier</b>	AV-550 SOIL STRENGTHENER
<b>Other Means of Identification</b>	Hydrophobic Grout
<b>Recommended Use</b>	Industrial Use Only.
<b>Restrictions on Use</b>	Not applicable.
<b>Manufacturer/Supplier Identifier</b>	Avanti International, 822 Bay Star Blvd, Webster, TX, 77598, USA, 281.486.5600, avantigrout.com
<b>Emergency Phone No.</b>	ChemTrec, 800.424.9300
<b>Date of Preparation</b>	April 03, 2018

**SECTION 2. HAZARD IDENTIFICATION**

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

**Classification**

Skin irritation - Category 2; Eye irritation - Category 2B; Respiratory sensitization - Category 1; Skin sensitization - Category 1; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 2

**Label Elements**

Signal Word:

Danger

Hazard Statement(s):

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H320	Causes eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands and skin thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves.
P284	In case of inadequate ventilation wear respiratory protection.

Response:

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P302 + P352 IF ON SKIN: Wash with plenty of water/  
 Soap  
 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 contact lenses, if present  
 and easy to do. Continue rinsing.  
 P332 + P313 If skin irritation occurs: Get medical advice/attention.  
 P337 + P313 If eye irritation persists: Get medical advice/attention.  
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE/doctor/  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 Storage:  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 Disposal:  
 P501 Dispose of contents and container in accordance with local, regional, national and international  
 regulations.  
**Other Hazards**  
 Not applicable.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Dibutyl maleate	105-76-0	50	DBM	
Methylenediphenyl diisocyanate (mixed isomers)	26447-40-5	25	MDI	

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Move to fresh air. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), call a  
 Poison Centre or doctor. Get medical advice or attention if you feel unwell.

##### Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Immediately wash gently and thoroughly with  
 lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation or a rash occurs, get medical  
 advice or attention. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

##### Eye Contact

Avoid direct contact. Wear chemical protective gloves if necessary. Immediately rinse the contaminated eye(s) with  
 lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if  
 present and easy to do. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye  
 irritation persists, get medical advice or attention.

##### Ingestion

Rinse mouth with water. Get medical advice or attention if you feel unwell or are concerned.

##### First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

#### Most Important Symptoms and Effects, Acute and Delayed

If inhaled: can cause effects as described for inhalation.

#### Immediate Medical Attention and Special Treatment

##### Target Organs

Kidneys, lungs, respiratory system.

##### Special Instructions

Monitor cardiovascular function. Monitor lung function.

##### Medical Conditions Aggravated by Exposure

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Asthma, dermatitis, respiratory conditions, skin allergies.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Use water to keep non-leaking, fire-exposed containers cool.

#### Unsuitable Extinguishing Media

None known.

### Specific Hazards Arising from the Product

This product presents no unusual hazards in a fire situation.

Very toxic carbon monoxide, carbon dioxide; extremely hazardous hydrogen cyanide; corrosive, oxidizing nitrogen oxides; very toxic polycyclic aromatic hydrocarbons.

### Special Protective Equipment and Precautions for Fire-fighters

Approach fire from upwind to avoid hazardous vapours or gases. Knock down vapours or gases with water fog or fine water spray.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

### Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Cover the spill surface with the appropriate type of foam to reduce the release of vapour. Contain and soak up spill with absorbent that does not react with spilled product. Large spills or leaks: dike spilled product to prevent runoff. Knock down vapour with fog or fine water spray. Flush spill area. Get expert advice before treating the spilled product with other chemicals to make it less hazardous. Contact emergency services and manufacturer/supplier for advice.

### Other Information

Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Prevent all skin contact. Avoid breathing in this product. Do not get in eyes, on skin or on clothing. Avoid generating vapours or mists. Prevent uncontrolled release of product. Avoid release to the environment. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). General hygiene considerations: it is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Do NOT smoke in work areas. Do NOT eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering eating areas or leaving work area. Consider using a double locker-shower facility. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

### Conditions for Safe Storage

Store in an area that is: cool, ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity).

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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## Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Methylenediphenyl diisocyanate (mixed isomers)	0.005 ppm			0.2 mg/m3		

### Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

### Individual Protection Measures

#### Eye/Face Protection

Wear chemical safety goggles. Wear chemical safety goggles and face shield when contact is possible.

#### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: Chemical Resistant Gloves: butyl rubber, neoprene rubber, nitrile rubber, polyvinyl chloride, Viton®/butyl rubber. Chemical Resistant Suit: Barrier® (PE/PA/PE), Saranex®.

#### Respiratory Protection

Wear a NIOSH approved air-purifying respirator with N100, R100, or P100 filter(s). And wear a NIOSH approved air-purifying respirator with an organic vapour cartridge. Either full-face piece or half-face piece with splash goggles.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	Light brown liquid.
Odour	Pungent
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); < 0 °F (-18 °C) (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.114
Solubility	Not available in water; Moderately soluble in ketones (e.g. acetone).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); 30 - 60 centipoises at 77 °F (25 °C) (dynamic)

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not applicable.

### Chemical Stability

Normally stable.

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## Possibility of Hazardous Reactions

None known.

## Conditions to Avoid

Water, moisture or humidity. Alkaline conditions (high pH).

## Incompatible Materials

Polymerizes on contact with: alcohols (e.g. ethanol), alkanolamines (e.g. triethanolamine), amines (e.g. triethylamine), glycols (e.g. ethylene glycol), phenols (e.g. carboric acid), reducing agents (e.g. hydroquinone), strong reducing agents (e.g. hydrides), water.

Not corrosive to metals.

## Hazardous Decomposition Products

None known.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Methylenediphenyl diisocyanate (mixed isomers)	2 mg/L (rat) (aerosol)	> 2000 mg/kg (rat)	> 9400 mg/kg (rabbit)
Dibutyl maleate		9300 mg/kg (mouse)	10010 mg/kg (rabbit)

Inhalation ATEmix = 8 mg/L

Oral ATEmix = 18600 mg/kg

Dermal ATEmix = 20020 mg/kg

### Skin Corrosion/Irritation

May cause mild irritation based on information for closely related chemicals.

### Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials.

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

May be harmful based on information for closely related materials. (Methylenediphenyl diisocyanate (mixed isomers)) may cause severe nose and throat irritation.

#### Skin Absorption

No information was located.

#### Ingestion

May be harmful based on animal tests.

### Aspiration Hazard

No information was located.

### STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause harmful effects on the kidneys. (Dibutyl maleate) irritation of the respiratory system. May cause respiratory tract injury. (Methylenediphenyl diisocyanate (mixed isomers)). (2-(2-ETHOXYETHOXY)ETHYL ACETATE)

### Respiratory and/or Skin Sensitization

May cause severe asthma-like symptoms (respiratory sensitization) based on information for closely related chemicals. May cause an allergic reaction (skin sensitization) based on information for closely related chemicals. (Methylenediphenyl diisocyanate (mixed isomers))

### Carcinogenicity

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Chemical Name	IARC	ACGIH®	NTP	OSHA
Methylenediphenyl diisocyanate (mixed isomers)	Group 3	Not designated	Not Listed	Not Listed
Dibutyl maleate	Not Listed	Not Listed	Not Listed	Not Listed

No information was located.

#### Reproductive Toxicity

##### Development of Offspring

No information was located.

##### Sexual Function and Fertility

No information was located.

##### Effects on or via Lactation

No information was located.

#### Germ Cell Mutagenicity

No information was located.

#### Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Toxic to aquatic life, based on acute toxicity tests. (Dibutyl maleate)

##### Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Methylenediphenyl diisocyanate (mixed isomers)		> 1000 mg/L (Daphnia magna (water flea))		
Dibutyl maleate	0.6 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)	21 mg/L (Daphnia magna (water flea); 48-hour)	6.2 mg/L (Desmodesmus subspicatus (algae); 72-hour)	

#### Persistence and Degradability

No ingredient of this product or its degradation products is known to be highly persistent.

#### Bioaccumulative Potential

Fish Bioconcentration Factor: 81.34 l/kg. (Dibutyl maleate) 200. (Methylenediphenyl diisocyanate (mixed isomers))

#### Mobility in Soil

If released into the environment, this product does not move through the soil.

#### Other Adverse Effects

There is no information available.

## SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

**Environmental** Not applicable

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**Hazards****Special Precautions** Not applicable**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15. REGULATORY INFORMATION****Safety, Health and Environmental Regulations****Canada****Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

All ingredients are listed on the DSL/NDSL.

**USA****Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

**SECTION 16. OTHER INFORMATION****NFPA Rating** Health - 1 Flammability - 1 Instability - 0**SDS Prepared By** Avanti International**Date of Preparation** April 03, 2018**Date of Last Revision** May 12, 2018**Revision Indicators** Not applicable.**Key to Abbreviations** ACGIH® = American Conference of Governmental Industrial Hygienists

IARC = International Agency for Research on Cancer

NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health

NTP = National Toxicology Program

OSHA = US Occupational Safety and Health Administration

RTECS® = Registry of Toxic Effects of Chemical Substances

**References**

CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).

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