

# MATERIAL SAFETY DATA SHEET — Arboritec Avenue

## Section 1 ~ CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Avenue (2-component)		[HMIS Classification] HEALTH: 1 REACTIVITY: 0 FLAMMABILITY: 0 PROTECTION: B	
Product Use Waterborne wood floor finish.			
Manufacturer's Name Arboritec AB Email: <a href="mailto:post@arboritec.com">post@arboritec.com</a>		Supplier's Name Arboritec USA, Inc. <a href="http://www.arboritec.com">www.arboritec.com</a>	
Street Address Olof Wijksväg 9 SE-444 65		Street Address 6200 South Syracuse Way, Ste. 125	
City Jörlanda	Province/Country Sweden	City Greenwood Village	State CO
Postal Code	Emergency Telephone +46 (0)303 56 330 (Sweden office hours)	Postal Code 80111	Emergency Telephone (available 24hrs/day) DOMESTIC NORTH AMERICA 800-424-9300 INTERNATIONAL 703-527-3887
Date MSDS Prepared July 25, 2009	Date of Last Revision None	Phone Number 303.773.7143	

## Section 2 ~ HAZARDOUS INGREDIENTS

Hazardous Ingredients ( <i>specific</i> )	% Weight	CAS Number	<u>Occupational Exposure Limits</u>	
			OSHA - PEL	ACGIH - TLV
Butyl diglycol	2.5-5	112-34-5	24 mg/m <sup>3</sup>	N/E

## SECTION 3 ~ HAZARDS IDENTIFICATION

### Primary Routes of Entry: Inhalation and Dermal

### Emergency Overview:

Caution: Contains small amounts of Butyl Diglycol. Do not breathe vapors or spray mist. Use with adequate ventilation. Wear an appropriate, properly fitted respirator (NIOSH, OSHA approved) in areas where proper ventilation is compromised (TLV exceeded). Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed when not in use. Do not store below 32°F(0°C) or above 100°F(37.7°C). KEEP OUT OF REACH OF CHILDREN. Before using read all directions and material safety data sheet for Avenue and Avenue Plus Hardener.

### Regulatory Data:

Section 313 supplier notification: This product contains the following chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40CFR 372: **None**.

This product contains the following chemical(s) which are known to the state of California to cause birth defects or other reproductive harm: **None**.

### Potential Health Effects:

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

### Toxicity Info:

No ingredients in this product are listed by OSHA, NTP, IARC or California Prop 65 as a mutagen, teratogen, or carcinogen, or as having toxic effects on reproduction. Toxicology info is listed in section 10. Safe handling procedures are listed in section 6.

## Section 4 ~ FIRST AID MEASURES

### **Skin Contact**

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

### **Eye Contact**

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 5 minutes, keeping eyelids open.

### **Inhalation**

Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

### **Ingestion**

If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

## Section 5 ~ FIRE FIGHTING MEASURES

Flammable No	Conditions to avoid? High temperatures, oxidizing agents, strong alkalis, strong acids	
Means of Extinction Recommended: alcohol-resistant foam, CO <sub>2</sub> , powders, water spray.		
Flashpoint (° C) and Method Closed cup: 105°C (221°F) [ASTM 6450]	Upper Flammable Limit (% by volume) Upper : 9.4%-v/v	Lower Flammable Limit (% by volume) Lower : 0.8%-v/v
Unusual Fire Explosion Hazards: Closed containers may explode (due to the build up of steam pressure) when exposed to extreme heat	Explosion Data — Sensitivity to Impact Not sensitive to impacts	
Hazardous Combustion Products Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.		
Special Firefighting Procedures: Water may be used to cool containers to prevent pressure build-up. In emergency conditions or IDLH (Immediately Dangerous to Life or Health) atmospheres, use a NIOSH-approved, positive pressure, self-contained breathing apparatus or full facepiece airline respirator.		

## Section 6 ~ SAFE HANDLING/USE INFORMATION and EXPOSURE CONTROL

### Safe Handling and Use Information

**RESPIRATORY PROTECTION:** PRODUCT NOT INTENDED FOR SPRAY APPLICATIONS. In areas where OSHA-PEL is exceeded, use a NIOSH- approved, properly fitted, air-purifying respirator with organic vapor cartridges.

**VENTILATION:** Use with adequate general and/or local ventilation to maintain exposure level below the OSHA-PEL.

**PROTECTIVE GLOVES:** Wear chemical-resistant gloves such as nitrile rubber.

**EYE PROTECTION:** Use chemical splash goggles or OSHA-approved safety glasses. Have an eyewash station available.

**OTHER PROTECTIVE EQUIPMENT:** Wear impervious clothing to avoid repeated or prolonged skin exposure.

**ADDITIONAL PRACTICES:** Wash hands thoroughly after using product, before eating or using rest rooms.

### Additional Handling and Storage Information:

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all open flames and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment. Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.

## Section 7 ~ SPILL OR LEAK PROCEDURE & SHIPPING INFO

**IN CASE MATERIAL IS RELEASED OR SPILLED:** Ventilate area. Remove with inert absorbent.

**WASTE DISPOSAL:** Dispose of contaminated absorbent, container and unused contents in accordance with local, state/provincial and federal regulations.

**SHIPPING INFORMATION:** Not regulated as a DOT hazardous material

## Section 8 ~ PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical State</u> Liquid	<u>Dry content (%)</u> 32	<u>Flash Point</u> Closed cup: 105°C (221°F) [ASTM 6450]
<u>Density</u> 1 g/cm <sup>3</sup>	<u>VOC Content</u> 3 % -or- 30 (g/l)	<u>Solubility in Water</u> Miscible
<u>Product Characteristics</u> Opaque, milky liquid with slight organic solvent odor.		

## Section 9 ~ REACTIVITY DATA

**STABILITY:** Stable

**REACTIVITY WITH WATER:** Not reactive with Water

**HAZARDOUS DECOMPOSITION PRODUCTS:** May include carbon monoxide, carbon dioxide, smoke and nitrogen oxides

**HAZARDOUS POLYMERIZATION:** Only when exposed to extreme high temperatures

**INCOMPATIBILITY:** Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids

## Section 10 ~ TOXICOLOGY DATA

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

## Section 11 ~ ECOLOGICAL DATA

There is no data available on the preparation itself.

Do not allow to enter drains or waterways.

## Section 12 ~ DISPOSAL CONSIDERATIONS

Do not allow to enter drains or waterways.

Dispose of according to all federal, state and local applicable regulations.

## Section 13 ~ TRANSPORT INFORMATION

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 14 ~ MISCELLANEOUS INFORMATION

The information in this MSDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this MSDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

Do not transfer contents to bottles or other unlabeled containers. Do not store in high temperature (above 100°F or 38°C) environments. Keep product from freezing.

**\*\*\*KEEP OUT OF THE REACH OF CHILDREN\*\*\***

**HMIS = Hazardous Materials Information System**

**0 = Minimal Hazard**

**1 = Slight Hazard**

**2 = Moderate Hazard**

**3 = Serious Hazard**

**4 = Severe Hazard**

**N/E: Not Established**

**PEL: Permissible Exposure Limit is an exposure limit to an airborne contaminant in a workday set by OSHA**

**TLV: Threshold Limit Value is a Time-weighted average concentration for a normal 8-hour workday without adverse effect**

The identities of ingredients are withheld as proprietary information.

# MATERIAL SAFETY DATA SHEET — Arboritec Avenue Plus Hardener

## Section 1 ~ CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Avenue Plus Hardener		[HMIS Classification] HEALTH: 2 REACTIVITY: 1 FLAMMABILITY: 2 PROTECTION: B	
Product Use Hardener for Avenue wood floor finish.			
Manufacturer's Name Arboritec AB Email: <a href="mailto:post@arboritec.com">post@arboritec.com</a>		Supplier's Name Arboritec USA, Inc. <a href="http://www.arboritec.com">www.arboritec.com</a>	
Street Address Olof Wijksväg 9 SE-444 65		Street Address 6200 South Syracuse Way, Ste. 125	
City Jörlanda	Province/Country Sweden	City Greenwood Village	State CO
Postal Code	Emergency Telephone +46 (0)303 56 330 (Sweden office hours)	Postal Code 80111	Emergency Telephone (available 24hrs/day) DOMESTIC NORTH AMERICA 800-424-9300 INTERNATIONAL 703-527-3887
Date MSDS Prepared July 25, 2009	Date of Last Revision None	Phone Number 303.773.7143	

## Section 2 ~ HAZARDOUS INGREDIENTS

Hazardous Ingredients ( <i>specific</i> )	% Weight	CAS Number	<u>Occupational Exposure Limits</u>	
			OSHA - PEL	ACGIH - TLV
Prepolymer isocyanate	50-75	63368-95-6	N/E	N/E
Dipropylene glycol methyl ether	20-25	34590-94-8	TWA – 100ppm; 606mg/m <sup>3</sup>	TWA – 100 ppm; STEL – 150 ppm

## SECTION 3 ~ HAZARDS IDENTIFICATION

### Primary Routes of Entry: **Dermal (Skin absorption, skin and/or eye contact), and Inhalation**

#### Emergency Overview:

PRODUCT NOT INTENDED FOR SPRAY APPLICATIONS. Caution: Contains isocyanates. Do not breathe vapors or spray mist. Use with adequate ventilation. May cause sensitization by skin contact. **Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.** Wear an appropriate, properly fitted respirator with organic vapor cartridges (NIOSH, OSHA approved) in areas where proper ventilation is compromised (TLV exceeded). Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed when not in use.

Do not store below 32°F(O°C) or above 100°F(37.7°C). KEEP OUT OF REACH OF CHILDREN. Before using read all directions and material safety data sheet for Avenue and Avenue Plus Hardener.

#### Regulatory Data:

Section 313 supplier notification: This product contains the following chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40CFR 372: **None.**

This product contains the following chemical(s) which are known to the state of California to cause birth defects or other reproductive harm: **None.**

#### Potential Health Effects:

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged contact with irritants may cause dermatitis. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains Benzene, 1,3-diisocyanatomethyl-, polymer with 1,6-diisocyanatohexane. May produce an allergic reaction.

#### Toxicity Info:

No ingredients in this product are listed by OSHA, NTP, IARC or California Prop 65 as a mutagen, teratogen, or carcinogen, or as having toxic effects on reproduction. This preparation may cause acute irritation and/or sensitization of the respiratory system.

People that have sensitized may then show asthmatic symptoms when exposed to concentrations well below the OEL. See section 2 for exposure limits. Toxicology info is listed in section 10. Safe handling procedures are listed in section 6.

## Section 4 ~ FIRST AID MEASURES

### Skin Contact

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

### Eye Contact

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 5 minutes, keeping eyelids open.

### Inhalation

Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

### Ingestion

If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

## Section 5 ~ FIRE FIGHTING MEASURES

<u>Flammability Classification:</u> OSHA Class IIIA combustible liquid		<u>Conditions to avoid?</u> High temperatures, oxidizing agents, strong alkalis, strong acids, amines, alcohols, water.
<u>Means of Extinction</u> Recommended: alcohol-resistant foam, CO <sub>2</sub> , dry chemical, water spray/mist. <b>Do not use water jet.</b>		
<u>Flashpoint (° C) and Method</u> Closed cup: 142°C (287.6°F) [ASTM 6450]	<u>Upper Explosion Limit (% by volume)</u> 14%-v/v	<u>Lower Explosion Limit (% by volume)</u> 1.1%-v/v
<u>Unusual Fire Explosion Hazards:</u> Closed containers may explode (due to the build up of steam pressure) when exposed to extreme heat		<u>Explosion Data — Sensitivity to Impact</u> Not sensitive to impacts
<u>Hazardous Combustion Products</u> Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.		
<u>Special Firefighting Procedures:</u> Water may be used to cool containers to prevent pressure build-up. In emergency conditions or IDLH (Immediately Dangerous to Life or Health) atmospheres, use a NIOSH-approved, positive pressure, self-contained breathing apparatus or full facepiece airline respirator.		

## Section 6 ~ SAFE HANDLING/USE INFORMATION and EXPOSURE CONTROL

<b>Safe Handling and Use Information</b>	PRODUCT NOT INTENDED FOR SPRAY APPLICATIONS.
<b>RESPIRATORY PROTECTION:</b> In areas where OSHA-PEL is exceeded, use a NIOSH- approved, properly fitted, air-purifying respirator with organic vapor cartridges and particulate filters.	
<b>VENTILATION:</b> Use with adequate general and/or local ventilation to maintain exposure level below the OSHA-PEL.	
<b>PROTECTIVE GLOVES:</b> Wear chemical-resistant gloves such as nitrile rubber.	
<b>EYE PROTECTION:</b> Use chemical splash goggles or OSHA-approved safety glasses. Have an eyewash station available.	
<b>OTHER PROTECTIVE EQUIPMENT:</b> Wear impervious clothing to avoid repeated or prolonged skin exposure.	
<b>ADDITIONAL PRACTICES:</b> Wash hands thoroughly after using product, before eating or using rest rooms.	
<b>Additional Handling and Storage Information:</b> Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all open flames and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.	
Put on appropriate personal protective equipment. Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.	

## Section 7 ~ SPILL OR LEAK PROCEDURE & SHIPPING INFO

**IN CASE MATERIAL IS RELEASED OR SPILLED:** Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in section 6. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 12). Place in a suitable container.

**WASTE DISPOSAL:** Dispose of contaminated absorbent, container and unused contents in accordance with local, state/provincial and federal regulations.

**EMPTY CONTAINER PRECAUTIONS:** Empty containers should be handled with care due to product residue. Decontaminate and neutralize containers prior to disposal by adding water to the container shoulder, recap and shake, dispose of according to local, state/provincial and federal regulations.

**SHIPPING INFORMATION:** Not regulated as a DOT hazardous material

## Section 8 ~ PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical State</u> Liquid	<u>Dry content (%)</u> 65 %	<u>Flash Point</u> Closed cup: 142°C (287.6°F) [ASTM 6450]
<u>Density</u> 1.1 g/cm <sup>3</sup>	<u>VOC Content</u> 35 % -or- 382 (g/l)	<u>Solubility in Water</u> Miscible
<u>Product Characteristics</u> Colorless, viscous liquid with solvent odor.		

## Section 9 ~ REACTIVITY DATA

**STABILITY:** Stable

**REACTIVITY WITH WATER:** Will react with water but not violently.

**HAZARDOUS DECOMPOSITION PRODUCTS:** May include carbon monoxide, carbon dioxide, smoke, nitrogen oxides hydrogen cyanide, monomeric isocyanates

**HAZARDOUS POLYMERIZATION:** Only when exposed to extreme high temperatures

**INCOMPATIBILITY:** Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids

## Section 10 ~ TOXICOLOGY DATA

Contains material which may cause damage to the following organs: upper respiratory tract, central nervous system (CNS), eye, lens or cornea.

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged contact with irritants may cause dermatitis. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains Benzene, 1,3-diisocyanatomethyl-, polymer with 1,6-diisocyanatohexane. May produce an allergic reaction.



## Section 11 ~ ECOLOGICAL DATA

There is no data available on the preparation itself.  
Do not allow to enter drains or waterways.

## Section 12 ~ DISPOSAL CONSIDERATIONS

Do not allow to enter drains or waterways. Residues in empty containers should be neutralized with a decontaminant (see section 7).  
Dispose of according to all federal, state and local applicable regulations.

## Section 13 ~ TRANSPORT INFORMATION

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. Refer to section 7.

## Section 14 ~ MISCELLANEOUS INFORMATION

The information in this MSDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this MSDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

Do not transfer contents to bottles or other unlabeled containers. Do not store in high temperature (above 100°F or 38°C) environments. Keep product from freezing.

**\*\*\*KEEP OUT OF THE REACH OF CHILDREN\*\*\***

**HMS = Hazardous Materials Information System**

**0 = Minimal Hazard**

**1 = Slight Hazard**

**2 = Moderate Hazard**

**3 = Serious Hazard**

**4 = Severe Hazard**

**N/E: Not Established**

**OEL: Occupational Exposure Limit**

**PEL: Permissible Exposure Limit is an exposure limit to an airborne contaminant in a workday set by OSHA**

**TLV: Threshold Limit Value is a Time-weighted average concentration for a normal 8-hour workday without adverse effect**

The identities of ingredients are withheld as proprietary information.