

# SAFETY DATA SHEET

GHS  
United States  
English

## Section 1. Product and company identification

<b>Product name</b>	<b>AGERITE® ODP A POWDER</b>	<b><u>In case of emergency</u></b>
<b>Code</b>	00260	1-203-853-1400
<b>Supplier/Manufacturer</b>	Vanderbilt Chemicals, LLC 30 Winfield Street Norwalk, CT 06855	Chemtrec: 1-800-424-9300 Outside US: +1-703-527-3887
<b>Chemical name</b>	Bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine	
<b>Synonym</b>	Not available.	
<b>Material uses</b>	Antioxidant.	
<b>Product type</b>	Solid.	

## Section 2. Hazards identification

<b>OSHA/HCS status</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	COMBUSTIBLE DUSTS
<b><u>GHS label elements</u></b>	
<b>Signal word</b>	
<b>Hazard statements</b>	May form combustible dust concentrations in air.
<b><u>Precautionary statements</u></b>	
<b>Prevention</b>	Not applicable.
<b>Response</b>	Not applicable.
<b>Storage</b>	Not applicable.
<b>Disposal</b>	Not applicable.
<b>Supplemental label elements</b>	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
<b>Hazards not otherwise classified</b>	None known.

## Section 3. Composition/information on ingredients

**Substance/mixture**                      Substance

<b>Ingredient name</b>	<b>CAS number</b>	<b>% by weight</b>
bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine	15721-78-5	≥93
alkylated diphenylamines (isomers)	-	≤7

## Section 3. Composition/information on ingredients

Bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine (CAS 15721-78-5) is a mono-constituent substance with alkylated diphenylamines (isomers) as impurities.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	No specific treatment.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	In case of fire, use water spray (fog), foam, dry chemical or CO <sub>2</sub> .
<b>Unsuitable extinguishing media</b>	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	May form explosible dust-air mixture if dispersed.
<b>Hazardous thermal decomposition products</b>	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
<b>Special protective actions for fire-fighters</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
<b>Remark(s)</b>	Dust suspended in air in critical proportions and in the presence of an ignition source presents an explosion hazard. The following characteristics apply to powder and also, are expected to apply to dust from pastilles if this form is reduced to a powder: <ul style="list-style-type: none"> <li>- Minimum explosive concentration: 0.025 oz/ft<sup>3</sup> [25 g/m<sup>3</sup>]</li> <li>- Minimum ignition energy (dust cloud): 0.20 joules [250.3 g/m<sup>3</sup>]</li> <li>- Maximum rate of pressure rise: 11,300 psi/sec (0.1 oz/ft<sup>3</sup>) [779.1 bars/sec (100 g/m<sup>3</sup>)]</li> <li>- Maximum pressure of explosion: 65 psig (2.0 oz/ft<sup>3</sup>) [4.48 bars (2002.31 g/m<sup>3</sup>)]</li> <li>- Maximum pressure of explosion: 7.6 ± 10% (P<sub>max</sub>) (bar)</li> <li>- (dP/dt)<sub>max</sub> (bar/s) = 919 ± 10%</li> <li>- Dust-specific constant(K<sub>st</sub>) (bar. m/s): 249 ± 10%</li> <li>- Explosion severity: 3.43 (Severe)</li> <li>- Volume resistivity: 4.28 x 10<sup>15</sup> ohm-cm</li> <li>- NFPA standard 499 rating (2008): Class II, Group G.</li> </ul>

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>Environmental precautions</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

<b>Small spill</b>	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
<b>Large spill</b>	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

#### **Protective measures**

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### **Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### **Exposure Limits for Total Product**

##### **As particles not otherwise specified (PNOS).**

TLV® TWA: 10 mg/m<sup>3</sup> inhalable particles (ACGIH)  
3 mg/m<sup>3</sup> respirable particles (ACGIH)

##### **As particles not otherwise regulated (PNOR).**

TWA: 15 mg/m<sup>3</sup> total dust (OSHA)  
5 mg/m<sup>3</sup> respirable dust (OSHA)

#### **Appropriate engineering controls**

The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### **Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## Section 8. Exposure controls/personal protection

### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields

### Skin protection

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

#### Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

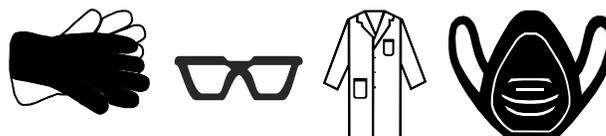
#### Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

### Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Dust respirator.

### Personal protective equipment (Pictograms)



## Section 9. Physical and chemical properties

### Appearance

Physical state	Solid. [Powder.]
Color	White to off-white.
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Melting point	>85°C (>185°F)
Boiling point	476.5°C (889.7°F)
Flash point	Open cup: 257°C (494.6°F)
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Not applicable.
Vapor pressure	Not available.
Vapor density	Not applicable.
Density	Not available.
Relative density	Not available.

## Section 9. Physical and chemical properties

<b>Solubility</b>	Insoluble in the following materials: cold water.
<b>Solubility in water</b>	Not available.
<b>Partition coefficient: n-octanol/water</b>	10.82
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not available.
<b>SADT</b>	Not available.
<b>Viscosity</b>	Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
<b>Incompatible materials</b>	Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
AGERITE® ODPA POWDER	LC50 Inhalation Dusts and mists	Rat	>5.8 mg/l	1 hours
	LD50 Oral	Rat	>5000 mg/kg	-

#### Irritation/Corrosion

Not available.

#### Conclusion/Summary

<b>Skin</b>	Non-irritating to the skin. (Rabbit)
<b>Eyes</b>	Non-irritating to the eyes. (Rabbit)

#### Sensitization

## Section 11. Toxicological information

Product/ingredient name	Route of exposure	Species	Result
AGERITE® ODPA POWDER	skin	Guinea pig	Not sensitizing

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
AGERITE® ODPA POWDER	OECD 471	Subject: Bacteria	Negative
	OECD 476	Subject: Mammalian-Animal	Negative
	OECD 487	Subject: Mammalian-Human	Negative

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

## Section 11. Toxicological information

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

#### Long term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

#### Potential chronic health effects

Not available.

#### Conclusion/Summary

According to OECD 408, "Subchronic Oral Toxicity - Rodent: 90 Day Study", the NOAEL for systemic toxicity in both male and female rats via the oral route is considered to be 1000 mg/kg.

According to OECD 414, "Prenatal Developmental Toxicity Study", the NOEL for maternal toxicity in rats via the oral route is considered to be 1000 mg/kg and the NOEL for developmental toxicity in rats via the oral route is considered to be 1000 mg/kg.

**General** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Teratogenicity** No known significant effects or critical hazards.

**Developmental effects** No known significant effects or critical hazards.

**Fertility effects** No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

### Other information

Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
AGERITE® ODPA POWDER	EC50 >1000 mg/l	Micro-organism	3 hours
	NOEC 1000 mg/l	Micro-organism	3 hours
	> limit of water solubility	Algae	96 hours
	> limit of water solubility	Daphnia	48 hours
	> limit of water solubility	Fish	96 hours

#### Conclusion/Summary

Based on the reliable and conclusive data for this product, the product is not toxic to aquatic organisms when the maximum amount of product is dissolved in water (i.e., at the limit of water solubility).

### Persistence and degradability

## Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
AGERITE® ODPA POWDER	OECD 301B	28 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
AGERITE® ODPA POWDER	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
AGERITE® ODPA POWDER	8.8	-	high

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) >427000

Other adverse effects No known significant effects or critical hazards.

## Section 13. Disposal considerations

### Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG\* : Packing group

## Section 14. Transport information

## Section 15. Regulatory information

[United States Inventory \(TSCA 8b\)](#) All components are active or exempted.

### [U.S. Federal regulations](#)

**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

### [SARA 302/304](#)

#### [Composition/information on ingredients](#)

No products were found.

### [SARA 304 RQ](#)

Not applicable.

### [SARA 311/312](#)

#### [Classification](#)

COMBUSTIBLE DUSTS

#### [Composition/information on ingredients](#)

No products were found.

### [State regulations](#)

#### [Massachusetts](#)

None of the components are listed.

#### [New York](#)

None of the components are listed.

#### [New Jersey](#)

None of the components are listed.

#### [Pennsylvania](#)

None of the components are listed.

#### [California Prop. 65](#)

None of the components are listed.

### [International regulations](#)

Bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine (CAS 15721-78-5) is a mono-constituent substance with alkylated diphenylamines (isomers) as impurities.

#### [Australia Inventory \(AIIIC\)](#)

All components are listed or exempted.

#### [Canada Inventory](#)

All components are listed or exempted.

#### [China Inventory \(IECSC\)](#)

All components are listed or exempted.

#### [Japan Inventory \(CSCL\)](#)

All components are listed or exempted.

#### [Korea inventory \(KECI\)](#)

All components are listed or exempted.

#### [New Zealand Inventory of Chemicals \(NZIoC\)](#)

All components are listed or exempted.

#### [Philippines Inventory \(PICCS\)](#)

All components are listed or exempted.

#### [Taiwan Chemical Substances Inventory \(TCSI\)](#)

All components are listed or exempted.

## Section 16. Other information

### [Hazardous Material Identification System \(U.S.A.\)](#)

Health	*	0
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### [National Fire Protection Association \(U.S.A.\)](#)



Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### [History](#)

<b>Date of printing</b>	3/23/2023
<b>Validation date</b>	3/23/2023
<b>Date of previous issue</b>	10/11/2022
<b>Version</b>	4

### [Key to abbreviations](#)

ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 UN = United Nations

### [References](#)

Not available.

### [Information contact](#)

**Vanderbilt Global Services, LLC**  
**Corporate Risk Management**  
**1-203-295-2143**

Visit [www.vanderbiltchemicals.com](http://www.vanderbiltchemicals.com) for more information.

### [Notice to reader](#)

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for himself the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

## Section 16. Other information