

# SAFETY DATA SHEET

Date Printed: 05/27/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** >95% Barium 4-Diphenylamine Sulfonate

**Product Code:** BA4DPH-SUNAT-01-P

**CAS Number:** 6211-24-1

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification

Acute toxicity - Oral Category 4

Acute toxicity - Inhalation (Dusts/Mists) Category 4

Label elements

Signal word Warning

Hazard statements

HARMFUL IF SWALLOWED

HARMFUL IF INHALED

Symbols/Pictograms



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

#### Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

N/A

#### Other Information

NFPA Health hazards 2 HMIS

Flammability 0

Instability -

Physical and chemical properties

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Health hazards 2

Flammability 1

Physical hazards

Personal protection -

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 6211-24-1

Molecular Weight 633.88

Formula C<sub>24</sub>H<sub>20</sub>BaN<sub>2</sub>O<sub>6</sub>S<sub>2</sub>

Chemical Name Barium diphenylamine-4-sulfonate

CAS No 6211-24-1

weight-% >98

Oral LD<sub>50</sub>, dermal LD<sub>50</sub>, Inhalation LC<sub>50</sub> -

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### SECTION 4. FIRST AID MEASURES

#### First Aid Measures

General advice If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do

not get in eyes, on skin, or on clothing.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and

continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin Contact Consult a physician if necessary. Wash off immediately with soap and plenty of water while

removing all contaminated clothes and shoes.

Inhalation Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce

vomiting.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms No data available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

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## **SECTION 5. FIREFIGHTING MEASURES**

Suitable Extinguishing Media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Unsuitable Extinguishing Media None.

Specific hazards arising from the chemical

Specific hazards arising from the chemical

No data available.

Hazardous combustion products Hydrogen sulfide. Carbon oxides. Nitrogen oxides (NO<sub>x</sub>).

Explosion data

Sensitivity to Mechanical Impact No data available.

Sensitivity to Static Discharge No data available.

Protective equipment and precautions for firefighters

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.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into

surface water or sanitary sewer system. 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.

Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp

to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray.

Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Store at room temperature.

Incompatible materials None known based on information supplied.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

Exposure Guidelines .

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

(11th Cir., 1992).

Chemical Name ACGIH TLV OSHA PEL NIOSH IDLH

Barium diphenylamine-4-sulfonate

6211-24-1

TWA: 0.5 mg/m<sup>3</sup> Ba TWA: 0.5 mg/m<sup>3</sup> Ba

(vacated) TWA: 0.5 mg/m<sup>3</sup> Ba

TWA: 0.5 mg/m<sup>3</sup> except Barium

sulfate Ba

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers

Eyewash stations

Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved

respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State Solid

Appearance No data available

Odor No data available

Property Values

pH No data available

Melting point/freezing point No data available

Boiling point No data available

Flash point No data available

Density No data available

Evaporation rate No data available

Upper flammability limits No data available

Lower flammability limit No data available

Vapor pressure No data available

Vapor density No data available  
Specific gravity No data available  
Water solubility No data available  
Solubility in other solvents No data available  
Partition coefficient No data available  
Autoignition temperature No data available  
Decomposition temperature No data available  
Kinematic viscosity No data available  
Explosive properties No data available  
Oxidizing properties No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity N/A  
Chemical stability Stable under recommended storage conditions.  
Possibility of Hazardous Reactions None under normal processing.  
Hazardous polymerization No data available.  
Conditions to avoid Extremes of temperature and direct sunlight.  
Incompatible materials Strong oxidizing agents.  
Hazardous Decomposition Products Hydrogen sulfide. Carbon oxides. Nitrogen oxides (NOx).

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure  
Inhalation No data available.  
Eye contact No data available.  
Skin Contact No data available.  
Ingestion No data available.  
Information on toxicological effects  
Symptoms No data available.  
Delayed and immediate effects as well as chronic effects from short and long-term exposure  
Chronic Toxicity No data available.  
Numerical measures of toxicity - Product Information  
Unknown acute toxicity No data available  
The following values are calculated based on chapter 3.1 of the GHS document  
ATEmix (oral) 500 mg/kg  
ATEmix (inhalation-dust/mist) 1.5 mg/l

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## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity May cause long lasting harmful effects to aquatic life  
100% of the mixture consists of component(s) of unknown hazards to the aquatic environment.  
Persistence and degradability No data available.  
Bioaccumulation No data available.  
Mobility No data available.

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## SECTION 13. DISPOSAL CONSIDERATIONS

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

Contaminated packaging Do not reuse container.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name California Hazardous Waste Status

Barium diphenylamine-4-sulfonate

6211-24-1

Toxic Toxic soluble

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## SECTION 14. TRANSPORT INFORMATION

DOT

UN/ID no UN1564

Hazard Class 6.1

Packing Group III

Proper shipping name Barium compounds, n.o.s.

Description UN1564, Barium compounds, n.o.s. (Barium diphenylamine-4-sulfonate), 6.1, III

Emergency Response Guide Number 154

IMDG

UN/ID no UN1564

Hazard Class 6.1

Packing Group III

Proper shipping name Barium compound, n.o.s.

Description UN1564, Barium compound, n.o.s. (Barium diphenylamine-4-sulfonate), 6.1, III

Special Provisions IB8, IP3, T1, TP33

EmS-No

F-A, S-A

IATA

UN/ID no UN1564

Hazard Class 6.1

Packing Group III

Proper shipping name Barium compound, n.o.s.

Description UN1564, Barium compound, n.o.s., 6.1, III

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## SECTION 15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists

TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC)

Philippines (PICCS)

Chemical Name TSCA DSL NDSL EINECS ELINCS ENCS IECSC KECL PICCS AICS

Barium

diphenylamine-4-sulfonate

X X - X - - X X X X

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - 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

US Federal Regulations

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.

SARA 311/312 Hazard Categories

Acute health hazard Yes

Chronic Health Hazard No

Fire hazard No

Sudden release of pressure hazard No

Reactive hazard No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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

Barium diphenylamine-4-sulfonate

6211-24-1

X Not Listed X

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.