

MATERIAL SAFETY DATA SHEET

PRODUCT CODE NUMBER(S): ALD-F001

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: 4,4'-Bis(carbazol-9-yl)phenyl
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation: Substance
 Component(s): 4,4'-Bis(carbazol-9-yl)phenyl
 Percent: >99.5%
 CAS Number: 58328-31-7
 Synonyms: /
 Chemical characterization: Chemical Formula: $C_{20}H_{12}N_2$

3. HAZARDS IDENTIFICATION

Most important hazards: Harmful if swallowed.
 Properties affecting health: Combustible substance. Keep away from fire.
 Physico-chemical properties: No information available.
 Specific hazards: Not applicable to the criteria for classification.
 Name of Classification: /

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Consult a physician.
 Skin contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If the appearance of the exposed skin has changed or pain persists, medical treatment should be arranged.
 Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
 Ingestion: Rinse mouth. Call a physician immediately.
 Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and airtight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: dry chemical, foam, water spray, carbon dioxide.
 Specific hazards: Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
 Fire-extinguishing methods: Fire-extinguishing work is done from the windward and the suitable

Special protective equipment for firefighters:

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Keep people away from and upwind of spill/leak.
 Environmental precautions: Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc. Fire-extinguishing devices should be prepared in case of a fire.
 Methods for cleaning up: Prevent product from entering drains.
 Prevention of secondary hazards: Sweep dust to collect it into an air-tight vessel, taking care not to disperse it. Adhered or collected material, etc. should be promptly disposed of, in accordance with appropriate laws and regulations.
 Removal of all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire.

7. HANDLING AND STORAGE

Handling: Handling is performed in a well ventilated place.
 Technical measures: Wear suitable protective equipment.
 Precautions: Handle with care to avoid dust dispersion.
 Storage: Wash hands and face before breaks and immediately after handling the product.
 Advice on safe handling: Handle in a local exhaust unit to prevent dust and aerosol from being generated.
 Storage conditions: Avoid contact with skin, eyes and clothing.
 Packaging material: Seal the container air-tight and store it in a cool dark place.
 Packaging material: Keep it away from fire sources, such as fire or heat source.
 Be sure to shield light.
 Law is followed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Install airtight equipment or a local exhaust unit so that workers should not be exposed directly. Also install equipment for washing eyes and body near the place is handled.
 Control parameters: Not set up.
 Personal protective equipment:

Respiratory protection: A dust mask, a simple dust mask, etc.

Hand protection: Protective gloves.

Eye protection: Safety glasses. A face-shield, if the situation requires.

Skin and body protection: Protective clothing. An apron, boots, etc. according to the situation.

Special instructions for protection and hygiene: After handling, wash hands and gargle well.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State (20 °C):

Form: Solid

Appearance: powder

Color: White

Odor: No data available

pH: No data available.

Information on changes in the physical state

Boiling Point/Range: No data available

Melting Point: No data available

Flash Point: No data available

Explosive properties

Explosive Lower: No data available

Explosive Upper: No data available

Density: No data available

Solubility: Soluble in: CH₂Cl₂

10. STABILITY AND REACTIVITY

Stability:

Stable at normal condition.

Reactivity: No special reactivity has been reported.

Materials to avoid: oxidizing agents

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, NO_x

11. TOXICOLOGICAL INFORMATION

Acute toxicity: No information available

Local effects: No information available

12. ECOLOGICAL INFORMATION

Mobility: No information available

Persistence / degradability: No information available

Bioaccumulation: No information available

13. DISPOSAL CONSIDERATIONS

Wear appropriate personal protective clothing.

In accordance with local and national regulations

If the substance is burned for disposal, it should be burned in a furnace equipped with an afterburner and a scrubber after resolving it a combustible solvent.

Empty the contents thoroughly before disposing of a container.

If the substance is difficult to be disposed of, (e.g. by reason that there is no waste disposal facility), it should be committed to an authorized industrial waste processing agent.

14. TRANSPORT INFORMATION

Hazards Class: Does not correspond to the classification standard of the United Nations

UN-No: Not Listed

Specific precautionary transport measures and conditions: When transporting the product, confirm that there is no leakage from the vessel.
Load with care lest it should collapse, tumble, fall, or be damaged.

15. OTHER INFORMATION

References:

• Dictionary of Organic Compound, Chapman & Hall (CD-ROM)

This MSDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. Products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.