



## MATERIAL SAFETY DATA SHEET

Product Name: Carbonate oligomer of tetrabromobisphenol A

### 1. Chemical Product and Company Identification

Product name: Carbonate oligomer of tetrabromobisphenol A

Chemical Family: Brominated aromatic carbonate oligomer

Synonyms: PBBC

Product Use: Flame Retardant

CAS No: 94334-64-2

Molecular Formula:  $(C_7H_5O_2)_n \cdot (C_{16}H_{10}Br_4O_3)_n \cdot (C_6H_5O)_m$  n=3-5

Manufacturer: Shandong Sunris New Materials Corporation

Address: Yangkou Town, Shouguang City, ShanDong Province

Zip Code: 261714

Country: P.R.China

Information Tel: 86-536-5341111

Fax: 86-536-5455598

### 2. Composition, Information on Ingredients

Ingredient Name	CAS NO.	Average degree of polymerization
Brominated aromatic carbonate oligomer	94334-64-2	5

### 3. Hazards Identification

Skin: May cause slight skin irritation.

Ingestion: Not expected to be a hazard in normal industrial use.

Inhalation: As with any dust, mechanical irritation is possible to mucous membranes and the respiratory tract.

Chronic Health Effects: None known

### 4. First Aid Measures

Eyes: Flush with large volumes of water for at least 15 minutes. Get medical attention.

Skin: Wash with large volumes of soap and water for at least 15 minutes. If irritation develops, get medical attention.

Ingestion: If conscious, give person 1 to 2 glasses of water. Get medical attention immediately.

Inhalation: Remove person to fresh air. Get medical attention.

Antidotes Notes to Physicians and/or Protection for First-Aiders: No information available



## 5. Fire Fighting Measures

Flammable Limits in Air (% by Volume): Not available

Flash Point: Not applicable

Autoignition Temperature: Not available

Extinguishing Media: All conventional media are suitable.

Fire Fighting Instructions: Wear a self-contained breathing apparatus and protective clothing to prevent skin and eye contact in fire situations.

Unusual Fire and Explosion Hazards:

Under fire conditions, toxic and irritating fumes may be emitted.

Flammability Classification: Non-flammable solid

Known or Anticipated Hazardous

Products of Combustion: Hydrogen bromide and/or bromine Carbon monoxide and carbon dioxide

## 6. Accidental Release Measures

Accidental Release Measures:

Wearing appropriate personal protective equipment, carefully sweep up material and place in suitable labeled containers for disposal.

Personal Precautions: See Section 8.

Environmental Precautions: Avoid releasing to the environment.

## 7. Handling and Storage

Handling:

Use appropriate personal protection equipment.

Avoid eye, skin and clothing contact.

Avoid breathing dust.

Avoid repeated and prolonged contact.

Avoid creating a dusting situation.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep container tightly closed.

Other Precautions: No information available

## 8. Exposure Controls/Personal Protection

Engineering Controls:

Adequate general ventilation is recommended when handling to control airborne levels.

Ventilation Requirements: Use local exhaust to minimize dusting. Use mechanical ventilation for general area control.



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## Personal Protective Equipment:

Eye/Face Protection: Chemical safety glasses with side shields or chemical safety goggles

Skin Protection: Rubber, plastic or neoprene

Clothing designed to minimize skin contact

## Respiratory Protection:

Wear a NIOSH/MSHA approved dust respirator if dusting occurs, or there is potential for airborne exposures to exceed established threshold values. Consult the OSHA respiratory protection information located at 29CFR 1910.134 and the American National Standard Institute's Practices of Respiratory Protection Z88.2.

## Work Hygienic Practices:

Wash thoroughly after handling. Wash contaminated clothing before reuse.

## 9. Physical & Chemical Properties

Appearance: White powder or granules

Color: White Physical

State: Solid

Boiling Point: Not available

Bulk Density: 0.61 (L); 1.00 (P)

Decomposition Temperature: Not available

Reactivity in Water: Not water reactive

Concentration: Not available

Freezing Point: Not available

Heat Value: Not available

Solubility in Water: <0.1 g/100 g at 25 degrees

Melting Point: 190 degrees C

Specific Gravity or Density (Water=1): 2.2 at 25 degrees C

## 10. Stability and Reactivity

Stability: Stable under normal conditions of handling and use.

Conditions to Avoid: None

### Incompatibility with Other Materials:

Acids and bases will slowly hydrolyze carbonate.

### Hazardous Decomposition Products:

Thermal decomposition may produce the following:

Hydrogen bromide and/or bromine

Carbon monoxide and carbon dioxide

Hazardous Polymerization: Will not occur

Conditions to Avoid: None



## 11. Toxicological Information

LD50 (dermal, rabbit) : >2g/kg

LD50 (inhalation, rat) : >5g/kg

## 12. Ecological Information

Ecological Information: Avoid releasing to the environment.

## 13. Disposal Consideration

Disposal Consideration: Dispose of waste at an approved chemical disposal facility in compliance with all current local or government laws and regulations.

## 14. Transport Information

Proper Shipping Name: Not regulated

UN Number: Not applicable

Hazard Class : Not applicable

Packaging Labels: Not applicable

Packaging Group: Not applicable

## 15. Regulatory Information

No information available

## 16. Other Information

Reference Documents:

1) Professor Yuxiang Ou, Flame retardant---Manufacturing, properties and application, published by Chemical Industrial, 1997

2) Other: This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

3) MSDS issue date:2008-07-05