



AccuStandard[®], Inc.

125 Market St., New Haven, CT 06513 USA

Tel: 203-786-5290 Fax: 203-786-5287

SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 - Product Identifiers

Catalog Name: B-049S

Description: 2,2',4,5'-Tetrabromobiphenyl in Isooctane

1.2 - Relevant Identified Uses of the Substance or Mixture

Laboratory Chemical Reference Material

1.3 - Supplier Details

Company: AccuStandard, Inc.
125 Market St.
New Haven, CT 06513 USA

Telephone Number: 203-786-5290

Fax: 203-786-5287

Email: edocs@accustandard.com

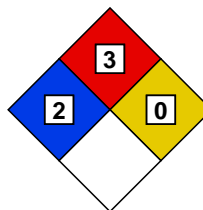
1.4 - Emergency Telephone Number

Emergency Phone #: AccuStandard, Inc.
1-203-502-7070 (USA)
+001-203-502-7070 (International)

24 hours / 7 days a week

SECTION 2 - HAZARDS IDENTIFICATION

2.1 - GHS Label Elements



2	HEALTH
3	FLAMMABILITY
0	PHYSICAL HAZARD

Signal Word: Danger

Hazard Codes:

H225 - Highly Flammable (Flammable liquids, category 2)

H302 - Harmful if swallowed. (Acute toxicity, oral, category 4)

H305 - Aspiration hazard if swallowed - may be harmful if swallowed and enters airways. (Aspiration hazard, category 2)

H315 - Irritating to skin. (Skin corrosion/irritation, category 2)

H319 - Causes severe eye irritation. (Eye damage/irritation, category 2A)

H336 - Vapors may cause drowsiness and dizziness. (Specific target organ toxicity, single exposure; Narcotic effects, Category 3)

Precautionary Codes:

P202 - This product should only be used by persons trained in the safe handling of hazardous chemicals.

P233 - Store in a tightly closed container. (P404)

SECTION 2 - HAZARDS IDENTIFICATION - continued**2.1 - GHS Label Elements** - continued

P260 - Do not breathe vapor.

P262 - Do not get in eyes, on skin or clothing.

P264 - Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

P280 - Protective gloves must be worn to prevent skin contact.

P284 - Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), or a risk assessment shows air-purifying respirators are appropriate, use of a NIOSH/MSHA approved air supplied respirator is advised. Use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges in absence of proper environmental control. Always use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Engineering and/or administrative controls should be implemented to reduce exposure.

P331 - Ingestion: Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

P338 - Eye contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers.

P352 - Skin contact: Wash thoroughly with soap and water. Get medical attention if irritation develops or persists.

2.2 - Other Hazards**2.2.1 - Symptom of Exposure Health/Environment**

Highly Flammable (Flammable liquids, category 2)

Vapors may cause drowsiness and dizziness. (Specific target organ toxicity, single exposure; Narcotic effects, Category 3)

Aspiration hazard if swallowed - may be harmful if swallowed and enters airways. (Aspiration hazard, category 2)

Isooctane has produced kidney damage in rats in a subchronic oral laboratory study.

2.2.2 - Potential Health Effects

Causes severe eye irritation. (Eye damage/irritation, category 2A)

Irritating to skin. (Skin corrosion/irritation, category 2)

May be harmful if absorbed through the skin. (Acute toxicity, dermal, category 5)

May be harmful if inhaled. (Acute toxicity, inhalation, category 5)

Harmful if swallowed. (Acute toxicity, oral, category 4)

2.2.3 - Routes of Entry

Inhalation, ingestion or skin contact.

2.2.4 - Carcinogenicity

California Proposition 65 Warning: This product contains a component (or components) that may cause cancer and genetic effects in a concentration less than 0.1%.

SECTION 3 - COMPOSITION / ANALYTES DATA

Description: 2,2',4,5'-Tetrabromobiphenyl in Isooctane

Synonyms: N/A

Molecular Weight: N/A

Molecular Formula: N/A

SECTION 3 - COMPOSITION / ANALYTES DATA - continued

Analyte	CAS #	% Concentration	ACGIH -TLV (mg/m ³)			OSHA -PEL (mg/m ³)		
			TWA	STEL	Skin	TWA	STEL	Skin
2,2',4,5'-Tetrabromobiphenyl	60044-24-8	0.004						
Isooctane	540-84-1	99.996						

SECTION 4 - FIRST AID MEASURES**4.1 - First Aid Procedures - General**

Get medical assistance for all cases of overexposure.

4.2 - Eye Contact

Eye contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. (P338)

4.3 - Skin Contact

Skin contact: Wash thoroughly with soap and water. Get medical attention if irritation develops or persists. (P352)

4.4 - Inhalation

Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

4.5 - Ingestion

Ingestion: Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. (P331)

SECTION 5 - FIRE FIGHTING MEASURES**5.1 - Flammable Properties**

Dangerous fire hazard.

Containers can build up pressure if exposed to heat.

Vapors can travel to a source of ignition and flash back.

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

5.2 - Extinguishing Media

Use alcohol foam, carbon dioxide, dry chemical, or water spray when fighting fires involving this material.

5.3 - Protection of Firefighters

As in any fire, wear self-contained breathing apparatus pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES**6.1 - Spill Response**

Wear suitable protective equipment listed under Exposure Controls / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Dispose as hazardous waste. Comply with Federal, State and local regulations.

SECTION 7 - HANDLING AND STORAGE

Store in a tightly closed container. (P404)

SECTION 7 - HANDLING AND STORAGE - continued

Store in a cool area away from ignition sources and oxidizers.

Do not breathe vapor. (P260)

Use with adequate ventilation.

Do not get in eyes, on skin or clothing. (P262)

Avoid prolonged or repeated exposure.

Electrically ground all equipment when handling this product.

This product should only be used by persons trained in the safe handling of hazardous chemicals. (P202)

SECTION 8 - EXPOSURE CONTROLS**8.1 - Engineering Controls/PPE**

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available. (P264)

8.2 - General Hygiene Considerations

Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), or a risk assessment shows air-purifying respirators are appropriate, use of a NIOSH/MSHA approved air supplied respirator is advised. Use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges in absence of proper environmental control. Always use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Engineering and/or administrative controls should be implemented to reduce exposure.

Material must be handled or transferred in an approved fume hood or with equivalent ventilation.

Protective gloves must be worn to prevent skin contact. (P280)

(Nitrile or equivalent)

Use eye protection tested and approved under the appropriate government standards such as NIOSH (US) or EN 166 (EU).

All recommendations are advisory only and must be evaluated by an industrial hygienist and/or safety officer familiar with the specific situation of anticipated use, such as concentration and amount of the substance in the workplace. Any recommendation should not be construed as offering an approval for any specific use of the product.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid

Odor: Mild odor

Odor Threshold: N/A

pH: N/A

Melting Point: -107.3 °C

Boiling Point: 99.2 °C

Flash Point: 10.4 °F (-12 °C) (cc)

Evaporation Rate (Butyl Acetate=1): >1

Flammability Class: N/A

Lower Flammability Level: 1.00

Upper Flammability Level: 6.00

Vapor Pressure: 41 mmHg (21 °C)

Vapor Density (Air = 1): 3.9 g/l

Specific Gravity: 0.691 g/cm³

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES - continued

Solubility in Water: Insoluble
Partition Coefficient: N/A
Autoignition Temperature: 396 °C
Decomposition Temperature: N/A
Viscosity: N/A
VOC Content: N/A
Percent Volatile: 99+

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable
Materials to Avoid: Oxidizers
Hazardous Decomposition: Oxides of carbon
Hazardous Polymerization: Will not occur
Condition to Avoid: Heat; Contact with ignition sources

SECTION 11 - TOXICOLOGICAL INFORMATION**Human Health Toxicity**

See section 2 for specific toxicological information for the ingredients of this product.

LD50 (Oral): Rat - 4300 mg/kg

LD50 (Dermal) : Rabbit - 1700 mg/kg

LC50 (Inhalation): Rat - 22 mg/L

Aspiration hazard if swallowed - may be harmful if swallowed and enters airways. (Aspiration hazard, category 2)

WARNING: This product contains chemical(s) known to the state of California to cause cancer and to cause birth defects or other reproductive harm.

No other information related to the toxicological properties of this product is available at this time.

SECTION 12 - ECOLOGICAL INFORMATION**Environmental Toxicity**

By complying with sections 6 and 7 there should be no release to the environment.

LC50 (Fish): 0.11 mg/L 96H

EC50 (Aquatic Invertebrate): 0.4 mg/L 48H

BCF: N/A

Not readily biodegradable

No other information related to the ecological properties of this product is available at this time.

SECTION 13 - DISPOSAL CONSIDERATIONS

Recycle or incinerate at any EPA approved facility or dispose in compliance with Federal, State and local regulations. Empty containers must be triple-rinsed prior to disposal.

SECTION 14 - TRANSPORT INFORMATION

Transportation Information (DOT/IATA)

SECTION 14 - TRANSPORT INFORMATION - continued

UN Number: UN1262

Class: 3

Packing Group: II

Proper Shipping Name: Octanes

Poison by Inhalation: No

Marine Pollutant: No

SECTION 15 - REGULATORY INFORMATION

Not all components are listed on the TSCA Inventory.

WARNING: This product contains chemical(s) known to the state of California to cause cancer and to cause birth defects or other reproductive harm.

This product contains a compound or compounds subject to EU Regulation (EC) No 1907/2006 (REACH) on Annex XIV, Annex XVII, and/or Article 59. Refer to the below table for details.

For laboratory, research and development use only. Not for manufacturing or commercial purposes.

In addition to federal and state regulations, local regulations may apply. Check with your local regulatory authorities.

Analyte	CAS #	% Concentration	REACH (1907/2006)		
			Annex XIV	Annex XVII	Article 59
2,2',4,5'-Tetrabromobiphenyl	60044-24-8	0.004		X	

SECTION 16 - OTHER INFORMATION

This document has been designed to meet the requirements of OSHA, ANSI, GHS and CHIPs regulations. Chemicals are classified using the Globally Harmonized System for Classification and Labeling of Chemicals and CLP Regulation (EC) No. 1272/2008.

The statements contained herein are offered for informational purposes only and are based on technical data that we believe to be accurate. The manufacturer will not assume any liability for the accuracy and completeness of this information. Final determination of the suitability of the material is the responsibility of the user. Although certain hazards are described herein, the user should not presume that these are the only hazards that exist. Since conditions and manner of use are outside of the manufacturers control, we make

NO WARRANTY OF MERCHANTABILITY, EXPRESSED OR IMPLIED, AND ASSUME NO LIABILITY RESULTING FROM ITS USE.

Legend : N/A = Not Available ND = Not Determined NR = Not Regulated

Alteration of any information contained herein without written permission from the manufacturer is strictly prohibited.

HMIS/NFPA HAZARD INDEX

- 0 - Minimal
- 1 - Slight
- 2 - Moderate
- 3 - Serious
- 4 - Severe

* - Additional Hazard

GHS HAZARD INDEX

Category 1 - Most Severe

Category 5 - Least Severe

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