



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : Tetrabromobisphenol A

Cat No.: A17395

CAS No. : 79-94-7

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended uses : Laboratory chemicals

Uses advised against: Food, drug, pesticide or biocidal product use.

1.3 Details of the supplier of the safety data sheet

Company : Krishna Solvechem Ltd.
B/503, Shayog, S. V. Road,
Kandivali (West), Mumbai – 400067. India.

Telephone : +91-22-6123 0222

Email : exports@kscl.co.in

1.4 Emergency telephone number

Emergency Phone : +91-8657457330

SECTION 2: Hazards identification

2.1 Classification

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

Carcinogenicity	(Category 1B)
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2.2 Label elements

Pictogram :



Signal word Danger

Hazard statement (s) May cause Cancer



Precautionary statement (s)

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and Understood.

Use personal protective equipment as required.

Response:

If exposed or concerned : Get medical attention / advice

Storage:

Store locked up

Disposal:

Dispose of contents/container to an approved waste Disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects
WARNING Cancer

SECTION 3: Composition / information on ingredients

3.1

Component	CAS-No	Weight %
Tetrabromobisphenol	79-94-7	>95

SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice :

If symptoms persist, call a physician.

If inhalation :

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

In case of skin contact :

Wash off immediately with plenty of water while removing all contaminated clothes and shoes. Get medical attention.

In case of eye contact :

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion :

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects :

None reasonably foreseeable

4.3 Notes to Physician :

Treat symptomatically



SECTION 5: Firefighting effects

5.1	Extinguishing media			
	Suitable extinguishing media:	Carbon dioxide (CO ₂), dry chemical,		
	Unsuitable Extinguishing Media: :	No information available		
5.2	Flash Point :	No information available		
	Method :	No information available		
	Autoignition Temperature:	Not applicable		
	Explosion Limits:			
	Upper	No data available		
	Lower	No data available		
	Sensitivity to Mechanical Impact	No information available		
	Sensitivity to Static Discharge	No information available		
	Specific Hazards Arising from the Chemical :	Do not allow run-off from fire-fighting to enter drains or water courses.		
	Hazardous Combustion Products :	Carbon monoxide (CO). Carbon dioxide (CO ₂). Hydrogen halides		
5.4	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.		
	<u>NFPA:</u>	Health	Flammability	Instability
		0	1	0
				Physical hazards
				N/A



SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, or skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

7.2 Conditions for safe storage

Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1 Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.



8.2 Exposure controls

Personal protective equipment -

Eye / Face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: powder solid, color: off-white
b) Odour	No information available
c) Odour Threshold	No information available
d) pH	No information available
e) Melting point / freezing point	181 °C / 358 °F
f) Initial boiling point and boiling range	No information available
g) Flash point	No information available
h) Evaporation rate	No information available
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	No data available No data available
k) Vapour pressure	No information available
l) Vapour density	Not applicable
m) Specific Gravity	No information available
n) Solubility	Insoluble in water
o) Partition coefficient: n octanol/water	No data available



p) Auto-ignition temperature	No information available
q) Decomposition temperature	No information available
r) Viscosity	Not applicable
s) Molecular formula	C ₁₅ H ₁₂ Br ₄ O ₂
t) Molecular Weight	543.88

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	None known, based on information available
10.2 Chemical stability :	Stable under normal conditions.
10.3 Possibility of hazardous reactions :	None under normal processing.
10.4 Conditions to avoid :	Incompatible products. Exposure to moist air or water
10.5 Incompatible materials:	Strong oxidizing agents
10.6 Hazardous decomposition products :	Carbon monoxide (CO), Carbon dioxide (CO ₂), Hydrogen halides
10.7 Hazardous Polymerization	No information available

SECTION 11: Toxicological information

11.1

Information on toxicological effects

Acute toxicity:

Product Information:

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tetrabromobisphenol A	LD50 > 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	Not listed

Toxicologically Synergistic Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure



Irritation: No information available

Sensitization: No information available

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS NO	IARC	NTP	ACGIH	OSHA	MEXICO
Tetrabromobisphenol A	79-94-7	Group 2A	Not listed	Not listed	X	Not listed

Mutagenic Effects: No information available.

Reproductive Effects: No information available.

Developmental Effects : No information available.

Teratogenicity: No information available.

STOT - single exposure : None known

STOT - repeated exposure: None known

Aspiration hazard : No information available.

Symptoms / effects,both acute and delayed: No information available

Endocrine Disruptor Information :

Component	EU-Endocrine Disruptors Candidate List	EU-Endocrine Disruptors-Evaluated substances	Japan-Endocrine Disruptor Information
Tetrabromobisphenol A	Group III Chemical	Not applicable	Not applicable

Other Adverse Effects : The toxicological properties have not been fully investigated.



SECTION 12: Ecological information

12.1

Ecotoxicity:

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Component	Freshwater algae	Freshwater fish	Microtox	Water flea
Tetrabromobisphenol A	EC50: > 5.6 mg/L, 96h (Pseudokirchneriella subcapitata)	LC50: = 0.06 mg/L, 96h static (Pimephales promelas) LC50: = 0.51 mg/L, 96h static (Lepomis macrochirus) LC50: = 0.54 mg/L, 96h flow-through (Pimephales promelas)	Not listed	EC50: 6.8 - 9.2 mg/L, 48h semi-static (Daphnia magna) EC50: = 0.96 mg/L, 48h (Daphnia magna)

12.2 Persistence and degradability: May persists

Bioaccumulation/ Accumulation

No information available

12.3 Mobility:

is not likely mobile in the environment due to its low water solubility. **Log Pow** : 5.903

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

14.1 UN number :

DOT: UN3077 **IMDG:** UN3077

IATA: UN3077 **TDG:** UN3077

14.2 UN proper shipping name

DOT : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

TDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

14.3 Transport hazard class(es)

DOT: 9 IMDG: 9 IATA: 9 TDG: 9

14.4 Packaging group:

DOT: III IMDG: III IATA: III TDG: III



SECTION 15: Regulatory information

15.1 United states of America Inventory:

Component	CA S-No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
Tetrabromobisphenol A	79-94-7	X	ACTIVE	T

Legend :

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

T- Indicates a substance that is the subject of a section 4 test rule under TSCA.

TSCA 12(b) - Notices of Export Section 4

International Inventories:

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Tetrabromobisphenol A	79-94-7	X	-	201-236-9	X	X	X	X	KE-23971

U.S. Federal Regulations

SARA 313

Component	CAS NO	Weight %	SARA 313-Threshold Values %
Tetrabromobisphenol A	79-94-7	>95	1.0

SARA 311/312 Hazard Categories

CWA (Clean Water Act)

Clean Air Act

OSHA - Occupational Safety and Health Administration

CERCLA

California Proposition 65

See section 2 for more information

Not applicable

Not applicable

Not applicable

Not applicable

This product contain the following Proposition 65 chemicals:

Component	CAS NO	California prop.65	Prop 65 NSRL	Category
Tetrabromo bisphenol A	79-94-7	Carcinogen	-	Carcinogen



15.2 U.S. State Right-to-Know Regulations:

Component	Massachusetts	New jersey	Pennsylvania	Illinois	Rhode island
Tetrabromobis phenol A	-	X	-	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland - This product does not contain the any DHS

Chemicals. **Security**

Other International Regulations

Mexico – Grade No information available

SECTION 16: Other information

16.1 Prepared By:

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Revision Summary:

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 C FR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

16.2 Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.