

Otto Chemie Pvt Ltd

An ISO 9001 : 2015 & GMP Certified Company
101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841
Email : info@ottokemi.com Web : www.ottokemi.com

Creation Date: 26-06-2025

Revision Date: 25-11-2030

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: 1,2,5,6,9,10-Hexabromocyclododecane, 95%
Product Code: H 0167
CAS No: 3194-55-6

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email info@ottokemi.com

1.4. Emergency telephone number

Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Reproductive toxicity, (Category

2)

Effects on or via lactation

Short-term (acute) aquatic
hazard, (Category 1)

Long-term (chronic) aquatic
hazard, (Category 1)

Persistent, bioaccumulative and
toxic

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H361

H362

H410

EUH440

Precautionary Statements

P201

P202

P260

P263

P273

P391

P501

plant.

Supplemental Hazard

Statements

Reduced Labelling (<= 125 ml)

Pictogram

H361: Suspected of damaging fertility or
the unborn child.

H362: May cause harm to breast-fed
children.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long
lasting effects.

EUH440: Accumulates in the environment
and living organisms including in humans.

Danger

Suspected of damaging fertility or the unborn child.

May cause harm to breast-fed children.

Very toxic to aquatic life with long lasting effects.

Accumulates in the environment and living organisms including
in humans.

Obtain special instructions before use.

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

Do not breathe dust.

Avoid contact during pregnancy and while nursing.

Avoid release to the environment.

Collect spillage.

Dispose of contents/ container to an approved waste disposal

none

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Signal Word
Hazard Statements
H361
H362
EUH440

Danger

Suspected of damaging fertility or the unborn child.
May cause harm to breast-fed children.
Accumulates in the environment and living organisms including in humans.

Precautionary Statements
P201
P202

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid release to the environment.
Collect spillage.
Dispose of contents/ container to an approved waste disposal plant.
none

P273
P391
P501

Supplemental Hazard
Statements

2.3 Other hazards
PBT substance

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	: C ₁₂ H ₁₈ Br ₆
Molecular weight	: 641,70 g/mol
CAS-No.	: 3194-55-6
EC-No.	: 221-695-9

Component	Classification	Concentration
1,2,5,6,9,10-Hexabromocyclododecane		
CAS-No. 3194-55-6 EC-No. 221-695-9	Repr. 2; Lact. ; Aquatic Acute 1; Aquatic Chronic 1; PBT ; H361, H362, H400, H410, EUH440 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 10	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section

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2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Hydrogen bromide gas

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

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

Skin protection

This recommendation applies only to the product stated in the safety data sheet,

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supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatrill® L

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatrill® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state

powder

b) Color

beige

c) Odor

odourless

d) Melting

Melting point/ range: 188 °C

point/freezing point

> 190 °C

e) Initial boiling point

and boiling range

f) Flammability (solid, gas)

No data available

g) Upper/lower

flammability or

explosive limits

No data available

h) Flash point

No data available

i) Autoignition

No data available

temperature

j) Decomposition

No data available

temperature

k) pH

No data available

l) Viscosity

Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

m) Water solubility

No data available

n) Partition coefficient:

log Pow: 5,62

n-octanol/water

o) Vapor pressure

No data available

p) Density

No data available

Relative density

No data available

q) Relative vapour density

No data available

r) Particle

No data available

characteristics

s) Explosive properties

Not classified as explosive.

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t) Oxidizing properties
9.2 Other safety information
No data available

none

SECTION 10: Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity

to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to algae EC50 - Skeletonema costatum (marine diatom) - 0,052 mg/l - 72 h

(OECD Test Guideline 201)

NOEC - Skeletonema costatum (marine diatom) - > 0,010 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to daphnia

and other aquatic invertebrates(Chronic toxicity)

NOEC - Daphnia magna (Water flea) - 3,1 µg/l - 21 d

(OECD Test Guideline 202)

12.2 Persistence and degradability

Biodegradability Result: - Not readily biodegradable.

(OECD Test Guideline 301)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT substance

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Product:

Assessment

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission

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Delegated regulation (EU) 2017/2100 or Commission
Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
No data available

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3077
IMDG: 3077
IATA: 3077

14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2,5,6,9,10-Hexabromocyclododecane)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2,5,6,9,10-Hexabromocyclododecane)
IATA: Environmentally hazardous substance, solid, n.o.s. (1,2,5,6,9,10-Hexabromocyclododecane)

14.3 Transport hazard class(es)
ADR/RID: 9
IMDG: 9
IATA: 9

14.4 Packaging group
ADR/RID: III
IMDG: III
IATA: III

14.5 Environmental hazards
ADR/RID: yes
IMDG Marine pollutant: yes
IATA: yes

14.6 Special precautions for user
Tunnel restriction code : (-)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids. Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

14.7 Maritime transport in bulk according to IMO instruments
Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Authorisations and/or restrictions on use
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
: 1,2,5,6,9,10-Hexabromocyclododecane
This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006.
Listed substance / Sunset Date : 1,2,5,6,9,10-Hexabromocyclododecane / 21.08.2015
After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)
: 1,2,5,6,9,10-Hexabromocyclododecane
National legislation
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards

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involving dangerous substances.

E1 ENVIRONMENTAL HAZARDS

15.2 Chemical safety assessment

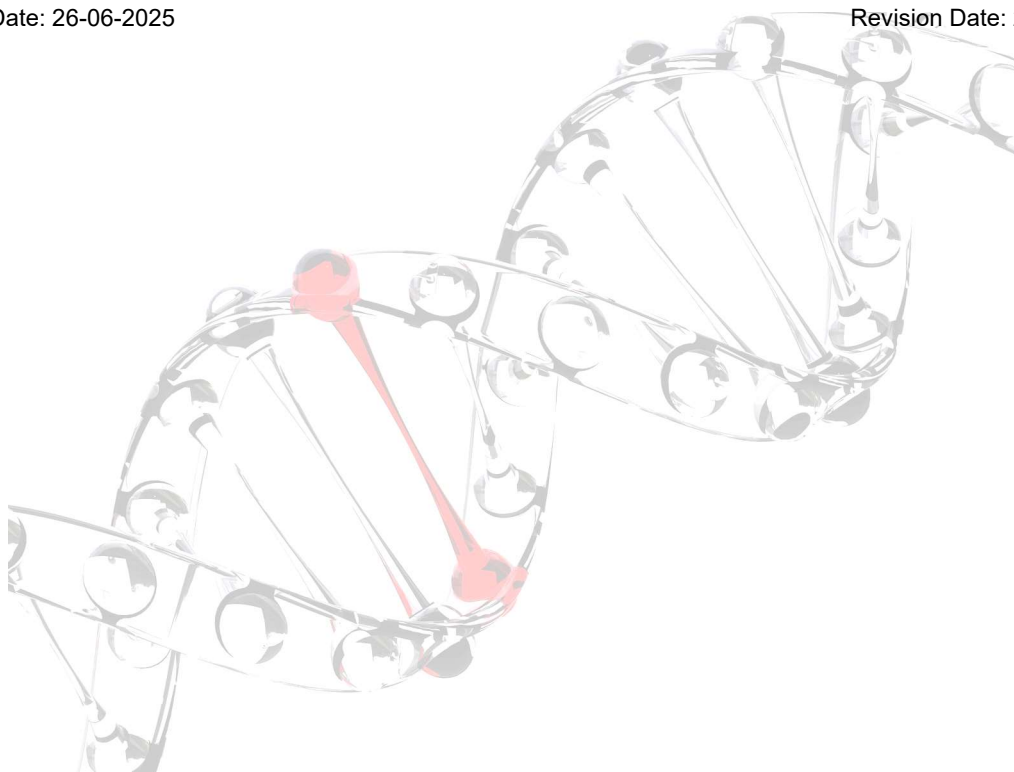
For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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