



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : Zinc bromide
Cat No.: 202100000; 202101000; 202105000
CAS No. : 7699-45-8

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 Limited.
B/503, Sahayog, 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

CLP Classification – Regulation (EC) No 1272/2008

Acute oral toxicity	(Category 4) H302
Skin Corrosion/Irritation	(Category 1 B) H314
Serious Eye Damage/Eye Irritation	(Category 1) H318
Skin Sensitization	(Category 1) H317
Chronic aquatic toxicity	(Category 2) H411
Substances/mixtures corrosive to metal	(Category 1) H290

2.2 Label elements

Pictogram :



Signal word

Danger

Hazard statement (s)

H290 – May be corrosive to metals



H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin Reaction
H411 Toxic to aquatic life with long lasting effects

Precautionary statement (s)

Prevention

Wear protective gloves/protective clothing/eye protection/face Protection

Ingestion :

IF SWALLOWED : Rinse mouth. Do NOT induce vomiting

Inhalation :

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell

IF ON SKIN (or hair):

If skin irritation occurs: Get medical advice/attention

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

Eyes:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

Disposal:

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified



SECTION 3: Composition / information on ingredients

3.1

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No1272/2008
Zinc bromide	7699-45-8	EEC No. 231-718-4	>95	Met. Corr. 1 (H290) Acute Tox. 4 (H302) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)

SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice:	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
If inhalation :	Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately. If not breathing, give artificial respiration.
In case of skin contact :	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact :	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion :	Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Drink plenty of water.

4.2 Most important symptoms and effects :	Causes burns by all exposure routes. May cause allergic skin reaction. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
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4.3 Notes to Physician :	Treat symptomatically
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SECTION 5: Firefighting effects

5.1 Extinguishing media

Suitable extinguishing media :	carbon dioxide (CO ₂), dry sand, dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media:	No information available



Autoignition Temperature:	No information available
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 :	The product causes burns of eyes, skin and mucous membranes.
Hazardous Combustion Products :	Hydrogen halides, Bromine, Zinc, Zinc oxide
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. Thermal decomposition can lead to release of irritating gases and vapors

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.
6.2 Environmental precautions	Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.
6.3 Methods and materials for containment and cleaning up	Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.



7.2 Conditions for safe storage

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store in metal containers.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK)(Germany)

Class 8B

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

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

8.2 Exposure controls

Personal protective equipment -

Eye / Hand protection

Goggles (European standard – EN 166). Protective gloves

Glove material : Natural rubber, nitrile rubber, Neoprene, PVC

EU Standard : EN 374

Skin protection and body protection

Long sleeved clothing. Inspect gloves before use.

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Off white solid powder
b) Odour	Odorless
c) Odour Threshold	No information available
d) pH	5.25
e) Melting point / freezing point	394 °C / 741.2 °F
f) Initial boiling point and	697 °C / 1286.6 °F



boiling range	
g) Flash point	Not flammable
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	4.220
n) Solubility	4470 g/L (20°C)
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	Not flammable
q) Decomposition temperature	> 650°C.
r) Viscosity	Not applicable
s) Molecular formula	Br ₂ Zn
t) Molecular Weight	225.19

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	None known, based on information available
10.2 Chemical stability :	Stable under normal conditions. hygroscopic
10.3 Possibility of hazardous reactions :	None under normal processing.
10.4 Conditions to avoid :	Excess heat. Exposure to moist air or water.
10.5 Incompatible materials:	Water. Strong oxidizing agents. Metals. Finely powdered metals.
10.6 Hazardous decomposition products :	Hydrogen halides. Bromine. Zinc. Zinc oxide
10.7 Hazardous Polymerization	Hazardous polymerization does not occur



SECTION 11: Toxicological information

11.1

Information on toxicological effects

Acute toxicity:

Product Information:

Oral Category 4

Dermal Based on available data, the classification criteria are not met

Inhalation No data available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc bromide	1477 mg/kg (Rat)	LD50 = >2000 mg/kg (Rabbit)	-

Component Information

Toxicologically Synergistic Products No information available

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

Irritation :	Category 1 B
Sensitization:	Category 1
Carcinogenicity :	No data available There are no known carcinogenic chemicals in this product

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: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

Endocrine Disruptor Information : No information available

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



SECTION 12: Ecological information

12.1

Ecotoxicity:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not allow material to contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Zinc bromide	LC50 = 115.9 mg/l (Fish) 96hOECD 203	EC50 = 8.8 mg/l (Daphniamagna) 48h OECD 202	EC50 = 6.6 mg/l (72h) (Phaeodactylum tricornutum)

12.2 Persistence and degradability: May persist, based on information available. Not relevant for inorganic substances. Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulation/ Accumulation May have some potential to bioaccumulate

12.3 Mobility: The product is water soluble, and may spread in water systems
Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

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 : ADR/RID: 3260
IMDG: 3260
IATA: 3260

14.2 UN proper shipping name

ADR/RID : Corrosive solid, acidic, inorganic, n. o. s

IMDG : Corrosive solid, acidic, inorganic, n. o. s

IATA : Corrosive solid, acidic, inorganic, n. o. s

14.3 Transport hazard class(es) ADR/RID: 8 IMDG: 8 IATA: 8

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

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture International Inventories

X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia(AICS), Korea (ECL).

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Zinc bromide	231-718-4	-		X	X	-	X	X	X	X	KE-35532



Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals
Not applicable

National Regulations

WGK Classification See table for values

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Zinc bromide	WGK3	

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

15.2 Chemical safety assessment A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: Other information

16.1 Prepared By: Regulatory affairs
Krishna Solvechem Ltd
Email: exports@kscl.co.in
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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.