



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : 2-Mercaptobenzimidazole

Cat No.: A18350

CAS No. : 583-39-1

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

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

Acute oral toxicity	(Category 3)
Skin sensitization	(Category 1)
Specific target organ toxicity (repeated exposure)	(Category 2)
Target Organs - Thyroid.	

2.2 Label elements

Pictogram :



Signal word

Danger

Hazard statement (s)

May cause damage to organs through prolonged or repeated exposure



Precautionary statement (s)

Prevention

Toxic if swallowed
Cause an allergic skin reaction

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Do not eat, drink or smoke when using this product
Contaminated work clothing should not be allowed out of the workplace
Avoid breathing dust/fume/gas/mist/vapors/spray

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

Ingestion:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth

Storage:

Store locked up



	Disposal: Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	Harmful to aquatic life with long lasting effects

SECTION 3: Composition / information on ingredients

3.1

Component	CAS-No	Weight %
2-Mercaptobenzimidazole	583-39-1	>98

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 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 :	Clean mouth with water and drink afterwards plenty of water.
4.2 Most important symptoms and effects :	May cause allergic skin reaction. 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
4.3 Notes to Physician :	Treat symptomatically

SECTION 5: Firefighting effects

5.1 Extinguishing media

Suitable extinguishing media :	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media: :	No information available
5.2 Flash Point : Method :	>250 °C / >482 °F No information available



Autoignition Temperature:	480 °C / 896 °F								
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 :	Keep the product and empty container away from heat and sources of ignition								
Hazardous Combustion Products :	Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO2). Sulfur oxides. Hydrogen cyanide (hydrocyanic acid). Sulfides.								
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>	<table border="1"> <thead> <tr> <th>Health</th> <th>Flammability</th> <th>Instability</th> <th>Physical hazards</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>1</td> <td>0</td> <td>N/A</td> </tr> </tbody> </table>	Health	Flammability	Instability	Physical hazards	3	1	0	N/A
Health	Flammability	Instability	Physical hazards						
3	1	0	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	Should not be released into the environment.
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	Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.
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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

None under normal use conditions

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

No protective equipment is needed under normal use conditions

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	Beige solid powder
b) Odour	Odorless
c) Odour Threshold	No information available
d) pH	5.65 (@ 30°C) 1% aq.solution
e) Melting point / freezing point	302 - 307 °C / 575.6 - 584.6 °F
f) Initial boiling point and	451 °C / 843.8 °F



boiling range	
g) Flash point	>250 °C / >482 °F
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	0 mmHg @ 25°C
l) Vapour density	Not applicable
m) Specific Gravity	No information available
n) Solubility	2.6 g/L @ 23 °C
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	480 °C / 896 °F
q) Decomposition temperature	No information available
r) Viscosity	Not applicable
s) Molecular formula	C7 H6 N2 S
t) Molecular Weight	150.2

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 :	Avoid dust formation. Incompatible products.
10.5 Incompatible materials:	Strong oxidizing agents, Strong bases
10.6 Hazardous decomposition products :	Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Sulfur oxides, Hydrogen cyanide (hydrocyanic acid), Sulfides
10.7 Hazardous Polymerization	Hazardous polymerization does not occur



SECTION 11: Toxicological information

11.1

Information on toxicological effects

Acute toxicity:

Product Information:

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-Mercapto benzimidazole	LD50 = 300 mg/kg (Rat)	LD50 >2000 mg/kg bw (rat)	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:	May cause sensitization by skin contact
Carcinogenicity :	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
2-Mercapto benzimidazole	583-39-1	Not listed	Not listed	Not listed	Not listed	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: Thyroid

Aspiration hazard : No information available.

Symptoms / effects, both acute and delayed: 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:

Do not empty into drains. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

12.2 Persistence and degradability:	Soluble in water Persistence is unlikely based on information Available.
Bioaccumulation/ Accumulation	No information available
12.3 Mobility:	Will likely be mobile in the environment due to its water solubility.

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 : UN2811 TDG : UN2811
IATA : UN2811 IMDG : UN2811

14.2 UN proper shipping name

DOT : TOXIC SOLIDS, ORGANIC, N. O. S. **TDG :** Toxic solid, organic, n. o. s.
IMDG : Toxic solid, organic, n. o. s. **IATA :** Toxic solid, organic, n. o. s.

14.3 Transport hazard class(es) DOT: 6.1 TDG: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group: DOT: III TDG: III IMDG: III IATA: III

SECTION 15: Regulatory information

15.1 United states of America Inventory:

Component	CAS-No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
2-Mercapto benzimidazole	583-39-1	X	ACTIVE	-

Legend:



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

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

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
2-Mercapto benzimidazole	583-39-1	X	-	209-502-6	X	X	X	X	KE-10607

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

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

Not applicable

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N



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

Other International Regulations

Mexico – Grade No information available

SECTION 16: Other information

16.1 Prepared By:	Regulatory affairs Krishna Solvechem Limited
Email:	exports@kscl.co.in
Creation Date:	23-Mar-2012
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Print Date:	24-Dec-2022
Revision Summary:	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 C F R 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.