

## **MATERIAL SAFETY DATA SHEET (MSDS)**

**SECTION 1: Identification** 

1.1 Product identifiers

Product Name: N-Bromosuccinimide

Cat No.: AC107450000; AC107450010; AC107450050; AC107450100;

AC107451000; AC107455000

**CAS No.:** 128-08-5

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, 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)

Oxidizing solids	(Category 3)
Skin Corrosion/Irritation	(Category 2)
Serious Eye Damage/Eye Irritation	(Category 2)
Corrosive to metals	(Category 1)
Skin sensitization	(Category 1)

#### 2.2 Label elements

Pictogram:



Signal word warning

Hazard statement (s) May intensify fire, oxidizer



Causes skin irritation
Causes serious eye irritation
May be corrosive to metals
May cause an allergic skin reaction

# Precautionary statement (s)

#### Prevention

Wash face, hands and any exposed skin thoroughly after handling.

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

Avoid breathing dust/fume/gas/mist/vapors/spray Contaminated work clothing should not be allowed out of the workplace.

Keep away from heat/sparks/open flames/hot surfaces – no smoking

Keep/store away from clothing/other combustible materials.

Take any precaution to avoid mixing with combustibles.

Keep only in original container.

#### 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

#### Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

#### Spills

Absorb spillage to prevent material damage

#### Storage:

Store in corrosive resistant polypropylene container with a resistant in liner.



Disposal:

Dispose of contents/container to an approved waste disposal

plant

Hazards not otherwise classified (HNOC)

very toxic to aquatic life

## **SECTION 3: Composition / information on ingredients**

#### 3.1

5.2

Flash Point:

Method:

Component	CAS-No	Weight %
2,5-pyrrolidinedione, 1-bromo-	128-08-5	>95

	SECTION 4: First aid measures							
4.1	Description of first aid measu	res						
	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 Get medical attention if symptoms occur.							
4.2	Most important symptoms and effects :	May cause allergic skin reaction. 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.						
4.3	Notes to Physician:	Treat symptomatically						
	SEC	CTION 5: Firefighting effects						
5.1	Extinguishing media							
	Suitable extinguishing media Unsuitable Extinguishing Media:	CO2, dry chemical, alcohol-resistant foam, dry sand No information available						

180 °C / 356 °F CC (Closed Cup)



Autoignition Temperature:

Not applicable

**Explosion Limits:** 

UpperNo data availableLowerNo data available

**Sensitivity to Mechanical** 

**Impact** 

No information available

Sensitivity to Static No information available

Discharge

**Specific Hazards Arising from** 

the Chemical:

Corrosive material. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Do not allow run-off from fire-fighting to enter drains or water courses. Oxidizer: Contactwith combustible/organic material may cause fire. May ignite combustibles (wood

paper, oil, clothing, etc.).

**Hazardous Combustion** 

**Products:** 

Carbon monoxide (CO). Carbon dioxide (CO2). Hydrogen halides.

Nitrogen oxides

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.

NFPA:	Health	Flammability	Instability	Physical hazards
MITA.	3	1	2	OX

## SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. 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. Soak up with inert absorbent material. Sweep up and shovel intosuitable containers for disposal.

#### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling



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

#### 7.2 Conditions for safe storage

Protect from direct sunlight. Store under an inert atmosphere. Keep refrigerated. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible Materials. Strong oxidizing agents. Strong bases. Strong acids. Alcohols. Amines. Ammonia. Metals. Strong reducing agents. Combustible material.

### 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. 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 StandardEN 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: Solid powder, off-white						
	b) Odour pungent						
	c) Odour Threshold No information available						
	d) pH No information available						
	e) Melting point / freezing 175 - 178 °C / 347 - 352.4 °F point						
	f) Initial boiling point and	No information available					



	boiling range						
	g) Flash point	180 °C / 3 5 6 °F CC(Closed cup)					
	h) Evaporation rate	Not applicable					
	i) Flammability (solid, gas)	No information available					
	j) Upper/lower flammability or explosive limits	No data available No data available					
	k) Vapour pressure	14.8 hPa @ 20 °C					
	l) Vapour density	Not applicable					
	m) Specific Gravity	No information available					
	n) Solubility	14.8 g/L (20°C)					
	o) Partition coefficient: n octanol/water	No data available					
	p) Auto-ignition temperature	Not applicable					
	q) Decomposition temperature	No information available					
	r) Viscosity	Not applicable					
	s) Molecular formula	C4 H4 Br N O2					
	t) Molecular Weight	177.99					
	SECTION 10: Stability and Reactivity						
10.1	Reactive Hazard :	Yes					
10.2	Chemical stability:	Moisture sensitive. Light sensitive. Oxidizer: Contact with combustible/organic material maycause fire.					
10.3	Possibility of hazardous reactions :	None under normal processing.					
10.4	Conditions to avoid :	Avoid dust formation. Incompatible products. Excess heat. Exposure to light. Exposure to moisture. Combustible material.					
10.5	Incompatible materials:	Strong oxidizing agents, Strong bases, Strong acids, Alcohols, Amines, Ammonia, Metals, Strong reducing agents, Combustible material					
10.6	Hazardous decomposition products :	Nitrogen oxides, Carbon monoxide (CO), Carbon dioxide (CO2), hydrogen halides					
10.7	Hazardous Polymerization	No information available					



## **SECTION 11: Toxicological information**

11.1

Information on toxicological effects

**Acute toxicity:** 

**Product Information:** 

**Toxicologically Synergistic** No information available

**Component Information** 

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

**Irritation:** Irritating to eyes and skin

**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
2,5-	128-08-	Not	Not	Not listed	Not listed	Not listed
pyrrolidinedione,	5	listed	listed			
1-bromo-						

Mutagenic Effects:	Not mutagenic in AMES Test
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:	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, musclepain 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:	very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.					
12.2 Persistence and degra	adability: 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	.1 UN number:									
	<b>DOT</b> : UN3084 <b>TDG</b> : UN3084									
	IATA: UN3084	<b>IMDG:</b> UN3084								
14.2	14.2 UN proper shipping name									
	DOT: CORROSIVE SOLIDS, OXIDIZING, N.O.S.									
	TDG: Corrosive solid, oxidizing, n.o.s.									
	IMDG: Corrosive solid, oxidizing, n.o.s.									
	IATA:	Corrosive solid	, oxidizing, n	.o.s.						
14.3	Transport hazard class(es)	DOT: 8 TDG: 8 IMDG: 8 IATA: 8								
14.4	Packaging group:	DOT: II	TDG: II	IMDG: II	IATA: II					

## **SECTION 15: Regulatory information**

### 15.1 United states of America Inventory:

Component	CAS- No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
2,5- Pyrrolidinedione, 1-bromo-	128-08-5	Х	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	ISHL	AICS	IECSC	KECL
2,5- Pyrrolidinedione,	128-08- 3	X	-	204-877- 2	Х	X	Х	Х	Х	KE- 03714
1-bromo-										

#### **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** - This product does not contain the any DHS Chemicals. **Security** 

#### **Other International Regulations**

Mexico – Grade No information available

Authorization/Restrictions according to EU REACH

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

			<u> </u>		
Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
2,5- Pyrrolidinedione, 1-bromo-	128-08-3	Not applicable	Not applicable	Not applicable	Not applicable
Component	CAS No		Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
2,5-Pyrrolidinedione, 1-bromo-	128-08-3	Not applicable	Not applicable	Not applicable	Not applicable

#### **SECTION 16: Other information**

**16.1 Prepared By:** Regulatory affairs

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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.