1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Chemical Name	N-Bromo Succinamide
CAS NO.	128-08-5

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

1. N-Bromo Succinamide (NBS) is a popular bromination reagent.
2. NBS is widely known as its ability to brominate in Allylic and benzlic positions if used in combination with a source of radicals.
3. Carbonyl derivatives can only be attacked if radical intermediates are stabilized, for example by the captodative effect. According to this principle. a-amino acid derivatives can be a-brominated.

Details of the supplier of the safety data sheet

COMPANY

POLYMER ADD (THAILAND) CO., LTD.
106, Chalaremprakiat, Lor 9, Soi 22, Yak 5,Nongbon, Prawet,Bangkok
Bangkok - 10250
Thailand
Telephone : 0804531391
Email - contact@polymeradd.co.th

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Physical and Chemical Hazards	Oxidizing solids (Category 3), H272 Corrosive to Metals (Category 1), H290
Human Health	Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Skin sensitization (Sub-category 1B), H317 Germ cell mutagenicity (Category 2), H341
Environment	Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 1), H410

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

2.2 Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

	Signal word	Warning
	H272	May intensify fire; oxidizer
	H290	May be corrosive to metals
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation
	H341	Suspected of causing genetic defects.
	H410	Very toxic to aquatic life with long lasting effects.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
	P302 + P352	IF ON SKIN: Wash with plenty of water.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present.
	P308 + P313	IF exposed or concerned: Get medical advice/ attention.
	According to European Directive 67/548/EEC as amended	none
2.3	Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Component	
Chemical Name	N-bromosuccinimide
CAS NO	128-08-5
EC Number	204-877-2
Molecular Formula	C4H4BrNO2
Molecular Weight	177.98
Concentration	<= 100 %

4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled	fresh air. Call in physician.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
In case of eye contact	rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
If swallowed	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 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5 FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	No data available
5.2 **Special hazards arising from the substance or mixture**	Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide gas Combustible. Development of hazardous combustion gases or vapours possible in the event of fire. Has a fire-promoting effect due to release of oxygen.
5.3 **Advice for firefighters**	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
5.4 **Further information**	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water

6 ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions protective equipment and emergency procedures**

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.

7 HANDLING AND STORAGE

7.1 **Precautions for safe handling**

Keep away from open flames, hot surfaces and sources of ignition.
For precautions see section 2.2.

7.2 **Information about protection against explosions and fires**

No data available

7.3 **Conditions for safe storage including any incompatibilities**

Away from combustible materials and sources of ignition and heat.
Do not store near combustible materials.
Recommended storage temperature 2 - 8 °C Light sensitive.
Moisture sensitive.
Store under inert gas.

7.4 **Specific end use(s)**

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

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control parameters**

Appropriate engineering controls

Immediately change contaminated clothing.
Apply preventive skin protection.

Wash hands and face after working with substance.

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

Body Protection

protective clothing

Control of environmental exposure

Do not let product enter drains

9 PHYSICAL AND CHEMICAL PROPERTIES

a)Appearance	light yellow powder
b)Odour	characteristic
c)Odour Threshold	No data available
d)pH (% solution in water)	No data available
e)Melting point/freezing point	175 - 180 °C - dec
f)Initial boiling point and boiling range	No data available
g)Flash point	Not applicable
h)Evaporation rate	No data available
i)Flammability (solid or gas)	The product is not flammable. - Test N.1: Test method for readily combustible solids
j)Upper/lower flammability or explosive limits	No data available
k)Vapour pressure	< 1 hPa at 20 °C - OECD Test Guideline 104
l)Vapour density	No data available
m)Relative density	2.1 g/cm3 at 20 °C
n)Water solubility	14.8 g/l at 20 °C - (decomposition), soluble
o)Partition coefficient: n-octanol/water	No data available
p)Autoignition temperature	> 400 °C - Relative self-ignition temperature for
q)Decomposition temperature	ca.180 °C -
r)Viscosity	No data available
s)Explosive properties	No data available
t)Oxidizing properties	The substance or mixture is classified as oxidizin

9.2 **Other safety information**

	Bulk Density	No data available
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 as
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	Exposure to light. Exposure to moisture. no information available
10.5	Incompatible materials	Strong oxidizing agents
10.6	Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide gas Other decomposition products - No data available In the event of fire: see section 5
11	**TOXICOLOGICAL INFORMATION**	
11.1	**Information on toxicological effects**	
	Acute oral toxicity	LD50 Oral - Rat - male and female - > 2.000 mg/kg
	Skin corrosion/irritation	Skin - Human Result: irritating (OECD Test Guideline 439) Remarks: (ECHA)
	Serious eye damage/eye irritation	Eyes - Rabbit Result: Eye irritation Remarks: (ECHA)
	Respiratory or skin sensitization	Local lymph node assay (LLNA) - Mouse Result: The product is a skin sensitizer, sub-category 1B. (OECD Test Guideline 429)
	Germ cell mutagenicity	Suspected of causing genetic defects. Ames test Salmonella typhimurium Result: Positive results were obtained in some in vitro tests. in vitro test Human lymphocytes Result: positive
	IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
	Reproductive toxicity	No data available
	Specific target organ toxicity - single	No data available

exposure

Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
RTECS	Not available

Signs And Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	semi-static test LC50 - Cyprinus carpio (Carp) - 0.4 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 0.65 mg/l - 48 h
Toxicity to Algae/Aquatic plants	static test EC50 - Pseudokirchneriella subcapitata (green algae) - 1.3 mg/l - 72 h

12.2 **Persistence and degradability**

Biodegradation

aerobic - Exposure time 35 d
Result: 98 % - Readily biodegradable.
(OECD Test Guideline 301A)

12.3 Bio accumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Other adverse effects	No data available

13 DISPOSAL CONSIDERATIONS

13.1 **Waste treatment methods**

Product

processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14 TRANSPORT INFORMATION

14.1 **UN number**

ADR/RID	IMDG	IATA
3084	3084	3084

14.2 **UN proper shipping name**

ADR/RID	IMDG	IATA
CORROSIVE SOLID, OXIDIZING, N.O.S. (N-bromosuccinimide)	CORROSIVE SOLID, OXIDIZING, N.O.S. (N-bromosuccinimide)	CORROSIVE SOLID, OXIDIZING, N.O.S. (N-bromosuccinimide)

14.3 **Transport hazard class(es)**

ADR/RID	IMDG	IATA
8 (5.1)	8 (5.1)	8 (5.1)

14.4 **Packaging group**

ADR/RID	IMDG	IATA
II	II	II

14.5 **Environmental hazards**

ADR/RID	IMDG Marine pollutant	IATA
no	no	no

14.6 Special precautions for user — No data available

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.

15.2 **Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

16 OTHER INFORMATION

H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H315	Causes skin irritation.
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H319	Causes serious eye irritation.
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Month of Creation	February 2021
Month of Revision	February 2024