

Safety Data Sheet

Release 1.0
Revision 07/27/2020
Date of issue 04/25/2022

1 Identification of the substance

1.1 Product identifier

Identification of the substance Polyhexamethylene biguanide hydrochloride - Solid

Additional identification PHMB

Catalogue Number FP76704

REACH No. A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

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

Identified uses basic Intermediates

Restriction on use not for food or drug use, for laboratory use only

1.3 Details of the supplier of the safety data sheet

Company Carbosynth Ltd
8&9 Old Station Business Park
COMPTON RG20 6NE
Phone +44 1635 578444
Mail customerservice@biosynth-carbosynth.com

1.4 Emergency telephone number

Phone 24hr/7days: +44 118 338 8269

2 Hazards identification

2.1 Classification of the substance or mixture

Physical Hazards

not classified

Health Hazards

Skin irritation (Category 2), H315

sensitisation (Category 1)

Eye damage (Category 1), H318

Specific target organ toxicity, single exposure (Category 3), H335

Environmental Hazards

Chronic aquatic toxicity (Category 1), H410

2.2 Label elements

Regulatory List

EC1272/08 Regulation (EC) 1272/2008 (GHS/CLP)

Symbol

GHS05 corrosion

Pictogram



GHS07 exclamation mark

Pictogram



GHS09 environmental hazards

Pictogram

**Signal Word**

Danger

Hazard Statement

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statement

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove casualty to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Remove contact lenses, if possible.
P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

2.3 Other hazards

Caution! To the best of our knowledge the toxicological properties of this material have not been thoroughly investigated.

3 Composition/information on ingredients**Substance related information**

Substance name Polyhexamethylene biguanide hydrochloride - Solid
Synonyms PHMB
Cas No. [32289-58-0]
Formula $(C_8H_{17}N_5)_n \cdot (HCl)_x$

4 First aid measures**4.1 Description of first aid measures****First Aid: Eye**

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult an ophthalmologist.

First Aid: Skin

Wash immediately with plenty of water and soap for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothes before reuse. Call a physician.

First Aid: Ingestion

Wash out mouth with water provided person is conscious. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed**Hints for Physician: Symptoms**

See Section 11 for additional information on health hazards

4.3 Indication of any immediate medical attention and special treatment needed**First Aid: Inhalation**

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Hints for Physician: Treatment

Treat symptomatically.

5 Firefighting measures**5.1 Extinguishing Media****Suitable**

foam, dry extinguishing powder, carbon dioxide (CO₂), water spray jet

5.2 Special hazards arising from the substance or mixture

Wear a self-contained breathing apparatus and chemical protective clothing.

Hazards During Fire-Fighting

toxic fumes

5.3 Fire-Fighting/Further Advice

Do not inhale explosion and combustion gases. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

6 Accidental release measures**6.1 Personal Precautions, protective equipment and emergency procedures**

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Provide adequate ventilation.

6.2 Environmental Precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Ensure all waste water is collected and treated via a waste water treatment plant.

6.3 Methods and material for containment and cleaning up

not available

6.4 Further Accidental Release Measures

Collect in closed and suitable containers for disposal. Clear contaminated areas thoroughly. Ventilate affected area.

7 Handling and storage**7.1 Precautions for safe handling****Handling advice**

Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid prolonged or repeated exposure. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities**Storage temperature**

store at 2°C - 8°C

Storage Requirements

Keep away from incompatible substances. Keep container tightly closed when not in use.

7.3 Specific end use(s)

8 Exposure controls/personal protection**8.1 Exposure limit values**

Does not contain any substances with occupational exposure limits.

8.2 Exposure controls**Industrial Hygiene**

Mechanical exhaust required. Safety shower and eye shower.

8.3 Personal Protective Equipment**Respiratory Protection**

Wear NIOSH/MSHA or European Standard EN 149 approved respirator.

Hand Protection

Wear compatible chemical-resistant gloves to prevent skin exposure.

Eye Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA.

Body Protection

Wear compatible chemical-resistant gloves and clothing to prevent skin exposure.

Advice on Safe Handling

Wash contaminated clothing before reuse. Wear appropriate protective clothing to prevent exposure.

9 Physical and chemical properties**9.1 Information on basic Physical and chemical color properties***Color*

white, slightly yellow

Form

powder

9.2 Other information

10 Stability and reactivity**10.1 Reactivity**

No Data Available

10.2 Chemical stability

No Data Available

10.3 Possibility of hazardous reaction

No Data Available

10.4 Conditions to Avoid (SDS)

incompatible materials

10.5 Incompatible materials

strong oxidizers

10.6 Hazardous decomposition products

nitrogen oxides (NOx), carbon dioxide (CO2), hydrogen chloride (HCl), carbon monoxide

11 Toxicological information**11.1 Information on toxicological effects****Acute Toxicity**

LD50 oral, Rat, 2,000 mg/kg

Acute Dermal Toxicity

LD50, Rat, 2,000 mg/kg

Other Relevant Toxicity Information

We are not aware of any toxicology data.

12 Ecological Information**12.1 Toxicity**

Acute toxicity versus Fishing	Test Type	Species	Method	Exposure Time	Value in standard unit mg/l
	No data available	No data available	No data available	No data available	No data available
Acute toxicity in aquatic plants	Test Type	Species	Method	Exposure Time	Value in standard unit mg/l
	No data available	No data available	No data available	No data available	No data available
Acute toxicity versus Daphnia and others aquatic invertebrates	Test Type	Species	Method	Exposure Time	Value in standard unit mg/l
	No data available	No data available	No data available	No data available	No data available

12.2 Persistence and degradability

Remarks : no data available

12.3 Bioaccumulative potential

Remarks : no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

Memo : Very toxic to aquatic life, long-term effects

13 Disposal considerations**Advice on Disposal and Packaging***Advice on Disposal*

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and Exhaust air. Dispose of waste according to laws applicable.

Advice on Packaging

not available

14 Transport information

	Road Transport(ADR/GGVS)	Air Transport(IATA)
14.1 UN number	3077	3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Polyhexamethylene biguanide hydrochloride)	Environmentally hazardous substance, solid, n.o.s. (Polyhexamethylene biguanide hydrochloride)
14.3 Transport hazard class(es)	9	9
14.4 Packing group	III	III
14.5 Environmental hazard class(es)	Hazards identified	Hazards identified
14.6 Special precautions for user	Not applicable	Not applicable
14.7 Transport in bulk according to Annex 11 of MARPOL and the IBC code	Not applicable	Not applicable

15 Other regulations

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

not available

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Polyhexamethylene biguanide hydrochloride - Solid	-----	-----	-----

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

16 Additional information

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