



Version: 4.0

Safety data sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Date / Revised: 04.08.2023

Product: **Biodolomer 900442**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Biodolomer® 900442

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

Recommended use: for industrial processing only

1.3. Details of the supplier of the safety data sheet

Supplier

GAIA BioMaterials AB

Bunkagårdsgatan 13

SE 253 68 Helsingborg Sweden

T: +46-42-300 39 99

info@gaiabiomaterials.com

1.4. Emergency telephone number

European emergency number: Telephone: 112 (24hours)

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to Regulation (EC) No 1272/2008 [CLP]

No need for classification according to GHS criteria for this product.

2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

The product does not require a hazard warning label in accordance with GHS criteria.

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

See section 12 - Results of PBT and vPvB assessment.

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrinedisrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
PBAT	(CAS-No.) 55231-08-8		Not classified
Talc	(CAS-No.) 14807-96-6		Not classified
PLA	CAS-No.) 9051-89-2		Not classified
Calcium Carbonate	(CAS-No.) 471-34-1		Not classified

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Avoid contact with the skin, eyes and clothing. Remove contaminated clothing.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Burns caused by molten material require hospital treatment.

On contact with eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

On ingestion:

Immediately rinse mouth and then drink 200 - 300 ml water, do not induce vomiting, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

Hazards: No hazards anticipated.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

5.2. Special hazards arising from the substance or mixture

Endangering substances: carbon monoxide, Carbon dioxide, tetrahydrofuran, fumes/smoke, carbon black, harmful vapours

Advice: Formation of further decomposition and oxidation products depends upon the fire conditions. Under special fire conditions traces of other toxic substances are possible.

5.3. Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

6.1. Personal precautions, protective equipment and emergency procedures

Avoid inhalation. Sources of ignition should be kept well clear.

6.2. Environmental precautions

No special precautions necessary.

6.3. Methods and material for containment and cleaning up

For large amounts: Sweep/shovel up.

For residues: Sweep/shovel up.

Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Processing machines must be fitted with local exhaust ventilation. When working on exhaust systems special safety precautions must be taken, because dangerous substances can accumulate in the residue of the exhaust system. Avoid the formation and deposition of dust. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Provide exhaust ventilation. When the product is ground (chopped), dust explosion regulations should be noted.

7.2. Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Polypropylene (PP)

Further information on storage conditions: Protect against moisture. Avoid extreme heat. Avoid direct sunlight. Avoid all sources of ignition: heat, sparks, open flame. The product must be stored according to the requirements of Regulation (EC) No 2023/2006. Contamination with other substances must be avoided. Storage together with other substances, especially hazardous substances, must be avoided.

Storage stability:

Protect against moisture.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

PNEC

The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.

DNEL

The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.

8.2. Exposure controls

Personal protective equipment symbol(s):



Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1)

Hand protection:

Use additional heat protection gloves when handling hot molten masses (EN 407), e.g. of textile or leather.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Avoid contact of molten material with skin. Avoid inhalation of dusts/mists/vapours. Eye wash fountains and safety showers must be easily accessible. Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

Environmental exposure controls

Avoid release to the environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Always wash hands after handling the product. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation. Wash contaminated clothing before reuse. Do not breathe dust.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White. Opaque.
Appearance	: Pellet.
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: 120 – 230 °C
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: > 400 °C (ASTM D1929)
Decomposition temperature	: > 280 °C
pH	: Not available
pH solution	: Not applicable
Viscosity, kinematic	: insoluble in water.
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: 1.2 – 1.3 g/cm ³
Density	: Not available
Relative density	: Not applicable
Relative vapour density at 20 °C	
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

Information with regard to physical hazard classes

Oxidizing properties

Fire promoting properties: not fire-propagating

Flammable solids

Burning rate: The material doesn't meet the criteria specified in paragraph 33.2.4.4 of UN manual of tests and criteria.

Self-heating substances and mixtures

Self heating ability: It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2.

Corrosion to metals: No corrosive effect on metal.

Other safety characteristics

Radioactivity: not radioactive for transport purposes (DIN 53466)

Bulk density: approx. 500 - 1,000 kg/m³ (20 °C, 1,013 hPa)

Miscibility with water: not soluble

Other Information: If necessary, information on other physical and chemical parameters is indicated in this section.

SAPT-Temperature: Product does not fulfil criteria for polymerizing substances according to transport regulations.

Evaporation rate: not applicable, The product is a non-volatile solid.

SECTION 10: Stability and Reactivity**10.1. Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:	No corrosive effect on metal.	
Reactions with water/air:	Reaction with:	water
	Flammable gases:	no
	Toxic gases:	no

10.2. Chemical stability The

product is chemically stable.

Peroxides: The product does not contain peroxides. The product/the substance has not a tendency towards the formation of peroxide.

10.3. Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.
The product is chemically stable.

10.4. Conditions to avoid

Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flame.

10.5. Incompatible materials

Substances to avoid:
strong oxidizing agents

10.6. Hazardous decomposition products

Possible decomposition products:
At prolonged and/or strong thermal stressing above the decomposition temperature dangerous decomposition products can be formed.

SECTION 11: Toxicological Information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

11.2. Information on other hazards

Endocrine disrupting properties

The product does not contain a substance that is considered to have endocrine disrupting properties according to EU REACH Article 57(f).

Other information

Other relevant toxicity information

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

The product has not been tested. The statement has been derived from the structure of the product.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product is biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

Elimination information: Biodegradable.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

Does not significantly accumulate in organisms.

Bioaccumulation potential:

Because of the product's consistency and low water solubility, bioavailability is improbable.

12.4. Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Endocrine disrupting properties

The product does not contain a substance that is considered to have endocrine disrupting properties according to EU REACH Article 57(f).

12.7. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.8. Additional information

Adsorbable organically-bound halogen (AOX):

This product contains no organically-bound halogen.

Add. remarks environm. fate & pathway:

At the present state of knowledge, no negative ecological effects are expected.

Other ecotoxicological advice: The product has not been tested. The statements on ecotoxicology have been derived from products of a similar structure and composition.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Can be used without re-conditioning.

Incinerate in suitable incineration plant, observing local authority regulations.

The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assignments.

Waste key:

07 02 13 waste plastic

Contaminated packaging:

Completely emptied packagings can be given for recycling.

SECTION 14: Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport

ADN

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

14.1. UN number or ID number

See corresponding entries for “UN number or ID number” for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

SECTION 15: Regulatory Information

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

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):
Listed in above regulation: no

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

A safety data sheet for this product is legally not required and is provided by us just as a courtesy to our customers.

Product is not classified as hazardous.

SECTION 16: Other Information

In addition to the information given in the safety data sheet we refer to the product specific 'Technical Information'.

Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.