Safety data sheet

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

1.1. Product identifier

Biodolomer®

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

Company:
GAIA BioMaterials AB
Makadamgatan 5
SE - 254 64 Helsingborg
SWEDEN
Telephone: +46 300 39 99
E-mail address: info@gaiabiomaterials.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

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

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

According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards:

Danger of burns while handling the hot 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.

According to Directive 67/548/EEC or 1999/45/EC

The product does not require a hazard warning label in accordance with EC Directives.

2.3. Other hazards

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

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Preparation based on: polyester, modified, Polyactide

SECTION 4: First-Aid Measures

4.1. Description of first aid measures
Remove contaminated clothing.

If inhaled:
After inhalation of decomposition products, move the affected person to a source of fresh air and keep calm. Provide medical aid. If difficulties occur after dust has been inhaled, move to fresh air and seek medical attention.

On skin contact:
Areas affected by molten material should be quickly placed under cold running water. 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:
Rinse mouth and then drink plenty of water. If difficulties occur: Seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms: No significant reaction of the human body to the product known.

Hazards: No hazard is expected under intended use and appropriate handling.

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

5.2. Special hazards arising from the substance or mixture
Carbon monoxide, carbon dioxide, tetrahydrofuran, fumes/smoke, carbon black, harmful vapours
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:
The degree of risk is governed by the burning substance and the fire conditions. In case of combustion evolution of toxic gases/vapours possible. 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
Sweep/shovel up. Avoid raising dust. Ensure adequate ventilation. 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
Further information on storage conditions: Protect against moisture. Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flame. The product is approved for food contact. 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.

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

8.2. Exposure controls

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 P1or 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. Avoid inhalation of dusts. Hands and/or face should be washed before breaks and at the end of the shift.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	granules	
Colour:	natural	
Odour:	faint specific odour, product specific	
Odour threshold:	not determined	
pH value:	not applicable	
melting range:	110 - 120 °C	(DIN 53736)
	150 - 160 °C	(DIN 53736)
Boiling range:	The substance / product decomposes therefore not determined.	
Flash point:	> 280 °C	(ASTM D1929)
Evaporation rate:	not applicable, The product is a nonvolatile solid.	
Flammability:	not highly flammable	

Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Ignition temperature:	> 400 °C	(ASTM D1929)
Vapour pressure:	not applicable	
Density:	approx. 0.8 - 1.4 g/cm3 (20 °C, 1,013 hPa)	
Relative density:	approx. 0.8 - 1.4 (20 °C, 1,013 hPa)	
Relative vapour density (air):	not applicable, The product is a nonvolatile solid.	
Solubility in water:	not soluble (20 °C, 1,013 hPa)	
Self ignition:	not self-igniting	
Thermal decomposition:	> 280 °C To avoid thermal decomposition, do not overheat.	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	

9.2. Other information

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

SECTION 10: Stability and Reactivity

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

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

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 toxicological effects

Acute toxicity

Assessment of acute toxicity:
Virtually nontoxic after a single ingestion. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Polyester, modified

Experimental/calculated data:
LD50 rat (oral): > 4,000 mg/kg (OECD Guideline 423)

Information on: Polylactide

Experimental/calculated data:
LD50 rat (oral): > 5,000 mg/kg

Irritation

Assessment of irritating effects:
Not irritating to the eyes. Not irritating to the skin. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Information on: Polyester, modified
Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Information on: Polyester, modified
Experimental/calculated data:
Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Polyester, modified
Experimental/calculated data:
modified Buehler test guinea pig: Non-sensitizing. (OECD Guideline 406)

Information on: Polylactide
Experimental/calculated data:
guinea pig: Non-sensitizing.

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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

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.

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.

Information on: Polyester, modified
Toxicity to fish:
LC50 > 100 mg/l, Leuciscus idus
Literature data.

Information on: Polyester, modified
Aquatic invertebrates:
EC50 (48 h) > 100 mg/l, Daphnia magna
Literature data.

Information on: Polyester, modified
Aquatic plants:
EC50 > 100 mg/l, Desmodesmus subspicatus

Literature data.
Information on: Polylactide
Aquatic plants:
EC50 (72 h) > 1,000 mg/l, algae

Information on: Polyester, modified
Soil living organisms:
(14 d), Eisenia foetida (OECD Guideline 207, artificial soil)
No effects at the highest test concentration.

Information on: Polyester, modified
Terrestrial plants:
Triticum aestivum (OECD Guideline 208)
No effects at the highest test concentration.

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.

Information on: Polylactide

Assessment biodegradation and elimination (H2O):
Biodegradable.

Information on: Polyester, modified
Elimination information:
90 - 100 % CO2 formation relative to the theoretical value (124 d) (ISO 14855) (aerobic, aerobic microorganisms)

12.3. Bioaccumulative potential

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

Information on: Polyester, modified
Bioaccumulation potential:
The product will not be readily bioavailable due to its consistency and insolubility in water.

Information on: Polylactide
Bioaccumulation potential:
Accumulation in organisms is not to be expected.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Study scientifically not justified.

12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

12.6. Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. Additional information

Add. remarks environm. fate & pathway:
At the present state of knowledge, no negative ecological effects are expected

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Check for possible recycling.
Observe national and local legal requirements.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.
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:	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:	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:	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:	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:	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
See corresponding entries for “UN 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. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Regulation: Not evaluated
Shipment approved: Not evaluated

Pollution name: Not evaluated
Pollution category: Not evaluated
Ship Type: Not evaluated

SECTION 15: Regulatory Information

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

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.

Chemical Safety Assessment not required

SECTION 16: Other Information

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

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.