

MATERIAL SAFETY DATA SHEET

Last Updated On: 06-Apr-2022

Revision Number: 6

1. Identification of the substance/preparation and the company

Trade Name	Mynusco
Product Name	BioPur
Product Description	Biocomposite materials made with up to 70% bio-content (starch, rice husk, bamboo, wood, coffee husk, or similar lignocellulosic fibers), binders (PLA, PBAT or similar compostable polymers) and other additives.
Recommended Use	Used for molded and extruded products
Company	Spectrus Sustainable Solutions Pvt Ltd Bangalore India.

2. Hazards identification

Overview	Non-hazardous material.
Skin Contact	Pellets are not likely to cause skin irritation
Eye Contact	Like other inert materials they are mechanically irritating to eyes
Inhalation	Pellet inhalation is unlikely due to physical form
Injection	Pellet injection is unlikely due to physical form
Other Information	Cool skin rapidly with cold water after contact with molten material. Excessive heating can release hazardous gases.

3. Composition/information on ingredients

This is a product mixture of binders (PLA, PBAT, or similar compostable polymers), lignocellulosic fibers (bamboo, rice husk, wood, coffee husk, etc), starch and few additives in small portions.

4. First aid measures

General Advice	No hazards which require special first aid measures.
Skin Contact	On contact with hot product, cool skin rapidly with cold water after contact with molten material. Treat the affected areas as thermal burns. Wash off with soap and plenty of water. Consult a physician.

Eye Contact	Wash well-open eyes immediately, abundantly and thoroughly with water. Remove particles remaining under the eyelids. Remove contact lens, if used. If irritation persists, consult an ophthalmologist.
Inhalation	If inhaled fumes from overheating or combustion of the material, move to fresh air. Provide oxygen or artificial respiration if needed. In case of persistent problems, consult a physician.
Injection	In case of any problems, consult a doctor.
Other Information	In case of insufficient ventilation, wear suitable respiratory equipment.

5. Fire fighting measures

Auto Ignition Temperature	390°C (734°F), estimated
Explosive Limits	Not determined
Suitable Extinguishing Media	Water spray, mist, foam, Carbon dioxide (CO ₂), Dry chemical
Extinguishing Media Should not be used	Not known
Hazardous decomposition products	Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbons fragments, traces of, hydrogen cyanide (hydrocyanic acid)
Special Protective Equipment for Firefighters	In the event of fire, wear self-contained breathing apparatus
Specific Hazards	Take precautionary measures against static discharges. During processing, dust may form explosive mixture in air. Thermal decomposition can lead to release of irritating gases and vapours

6. Accidental release measures

Clean Up	Sweep up and shovel into suitable containers for disposal. Do not create a powder cloud by using a brush or compressed air
Personal Precautions	Refer to section 8
Environmental Precautions	Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

7. Handling and storage

Handling	Handle in accordance with good industrial hygiene and safety practice. Provide for appropriate exhaust ventilation and dust collection at machinery. Avoid dust formation.
Storage	Keep tightly closed in a dry and cool place. Keep away from heat and sources of ignition.

8. Exposure controls / Personal protection

Engineering Measures to Reduce Exposure	In the case of hazardous fumes, wear self-contained breathing apparatus. Wear face-shield and protective suit for abnormal processing problems. Handle in accordance with good industrial hygiene and safety practice. Provide for appropriate exhaust ventilation at machinery
Skin and Body Protection	Long sleeved clothing
Hand Protection	Protective gloves
Eye Protection	Safety glasses with side-shields
Respiratory Protection	In the case of hazardous fumes, wear self-contained breathing apparatus. In case of insufficient ventilation wear suitable respiratory equipment
Hygiene Measures	When using, do not eat, drink or smoke

9. Physical and chemical properties

Physical State	Solid
Appearance	Pellets
Colour	Various
Odor	None. May have dry bamboo smell in some cases
Melting Point Range	165°C +/- 20°C (329°F +/- 68°F)
Auto Ignition Temperature	400°C (752°F), estimated
Water Solubility	Insoluble
Vapor Pressure	Negligible
Evaporation Rate	Negligible
Specific Gravity	>1.2
VOC Content (%)	Negligible
Explosive Limits	Not determined

10. Stability and reactivity

Stability	Stable at normal conditions
Conditions to avoid	Avoid temperatures above 200°C (390°F). To avoid thermal decomposition, do not overheat. Heating can release hazardous gases
Hazardous Decomposition Products	Thermal decomposition giving flammable and toxic products such as Carbon dioxide (CO ₂), Carbon monoxide

11. Toxicological information

Primary Irritation	Substance does not generally irritate and is only mildly irritating to the skin
Remarks	The toxicological data has been taken from products of similar composition

12. Ecological information

Ecotoxicity Effects	Do not flush into surface water or sanitary sewer system
Other Information	Ecological damages are not known or expected under normal use

13. Disposal consideration

Waste from unused products	Where possible recycling is preferred to disposal or incineration. ¹¹ Dispose of in accordance with local regulations
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14. Transport information

Not regulated as hazardous for shipment, unless noted below, under current transportation guidelines

15. Regulatory information

- R10 Flammable
- R36 Irritating to eyes
- R37 Irritating to respiratory tracks
- R38 Irritating to skin R42 May cause sensitization by inhalation
- R43 May cause sensitization by skin contact

16. Other information

This material safety data sheet is suitable for all grades of BioPur biocomposite materials. With different grades, the key ingredients remain unchanged. Minor changes to the formulation and percentage of key ingredients may change with different grades, which shall not result in significantly different behaviour of the material from a material safety and handling perspective.

This publication provides information and guidelines for safe handling and processing of Spectalite materials and is based on currently available experience and knowledge. It is not designed as a comprehensive product performance data sheet, nor as a guide to application possibilities of our materials. Users should follow all applicable local regulations governing Health and Safety at work, and are requested to pass this publication on to all relevant employees and customers. The information in this Material Safety Data Sheet (MSDS) is provided in good faith and believed to be accurate. This MSDS contains a general summary of hazards known to us, but does not purport to describe every any hazards associated with our products. WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, REGARDING THE INFORMATION CONTAINED HEREIN OR ITS PRODUCTS, INCLUDING BUT NOT LIMITED TO ANY WARRANTY AS TO ACCURACY OR COMPLETENESS OF INFORMATION, OR ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.