

# SAFETY DATA SHEET

## BrightBio® Tough, Pearl White



According to Regulation (EC) No. 1907/2006  
Version 1.0 Revision Date 08.02.2023  
GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA

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

#### 1.1 Product identifiers

Product Name: BrightBio® Tough, Pearl White

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

Identified uses: Thermoplastic biopolymer

#### 1.3 Details of the supplier of the safety data sheet

Company: Brightplus Oy  
Gneissikuja 5-8  
FI-90620 OULU FINLAND  
Telephone: +358 (0)20 728 99 70  
E-mail address: info@brightplus.com

#### 1.4 Emergency telephone number

Emergency Phone #: Myrkytystietokeskus +358 9 4711

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Not classified as dangerous.

#### 2.2 Label elements

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

Not classified as dangerous.

#### 2.3 Other hazards

Other hazards not contributing to the classification: Warning. Potential dust explosion hazard. Dust may form explosive mixture in air. This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII. This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

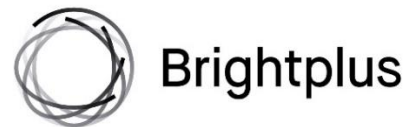
### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Substance type: Thermoplastic

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<u>Component</u>	<u>Concentration in wt-%</u>
Biopolymer resin	>99%
CAS-No. n/a	
EC-No. n/a	
Non Hazardous component	

### 3.2 Mixtures

Not applicable

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### If inhaled

If breathed in, move person into fresh air and keep comfortable for breathing

#### In case of eye contact

Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If hot melted material should splash into the eyes, flush eyes immediately with water for 15 minutes while holding the eyelids open. Immediately call a poison centre or doctor.

#### In case of skin contact

Wash skin with soap and plenty of water. If irritation occurs, get medical attention. For contact with molten product, do not remove contaminated clothing. Flush skin immediately with large amounts of cold water. If possible, submerge area in cold water. Pack with ice. DO NOT attempt to peel polymer from skin. Seek medical attention immediately.

#### If swallowed

Treat symptomatically. Call a poison centre or a doctor if you feel unwell.

#### Personal Protection for First-aid Responders

When providing first aid always protect yourself against exposure to chemicals or blood born diseases by wearing gloves, masks and eye protection. After providing first aid wash your exposed skin with soap and water.

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

See section 11.

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

Treat symptomatically.

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, dry chemical or foam for extinction. CO2 may be ineffective on large fires.

### 5.2 Special hazards arising from the substance or mixture

Dust can form an explosive mixture with air, under fire conditions, hazardous fumes will be present: Carbon

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dioxide, Carbon monoxide, Acetaldehyde.

See section 10 for additional information.

### 5.3 Advice for firefighters

Evacuate personnel to a safe area. Use water spray or fog for cooling exposed containers.

Move containers from fire area if it can be done without personal risk. Prevent fire fighting water from entering the environment.

Thermoplastic polymers can burn. Protect product from flames; maintain proper clearance when using heat devices, etc. Irritating or toxic substances will be emitted upon burning, combustion or decomposition. Large masses of molten polymer held at elevated temperatures for extended periods of time may auto-ignite.

### 5.4 Further information

Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protective equipment. Avoid contact with eyes and skin. Evacuate unnecessary personnel.

Ventilate spillage area. Avoid dust formation. Avoid breathing dust. In case of dust release, avoid flames and sparks. Eliminate all sources of ignition.

### 6.2 Environmental precautions

Avoid release to the environment. Components may be harmful to aquatic life with long lasting effects.

### 6.3 Methods and materials for containment and cleaning up

Stop leak without risks if possible. Avoid creating or spreading dust.

When cleaning up, avoid dust formation. Shovel or sweep up and put in a closed container for disposal. Flush contaminated areas with plenty of water. Use non-sparking tools. Never return spills in original containers for possible later re-use.

Other information: Dispose of materials or solid residues at an authorized site.

### 6.4 Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13. For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Dust may form flammable and explosive mixture with air. Protect from moisture. Wear personal protective equipment. Observe good industrial hygiene practices. Avoid contact with skin and eyes. Do not breathe dust.

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Ensure good ventilation of the workstation. Avoid environmental contamination.

Contact with heated material may cause thermal burns. Wash thoroughly after handling.

Refer to Processing Guide and/or contact your local Technical Service representative for melt processing temperature range. Heating above maximum handling temperature can generate hazardous decomposition products (see Section 10).

Fume condensates may include hazardous contaminants from additives. Condensate may be combustible and should be periodically removed from exhaust hoods, ductwork, and other surfaces. Impervious gloves should be worn during clean-up operations to prevent skin contact.

Post thermal processing activities necessary to produce moulded articles (such as cutting, sanding, sawing, grinding, drilling, or regrinding) may create dust or "fines". Powders, dust, and/or fines may pose a dust explosion hazard. Avoid breathing dust.

Loading and unloading operations may cause nuisance dust form. Electrostatic build-up may occur when pouring or transferring this product from its container. The spark produced may be sufficient to ignite vapours of flammable liquids. Always transfer product by means which avoid static build-up. Avoid pouring product directly from its container into combustible or flammable solvent.

Conduct any operations emitting fumes or vapours (including thermoforming, heat joining, cutting and sealing of articles and clean up) under well-ventilated conditions. Avoid breathing process vapours. Do not hold product for extended periods of time at elevated temperatures or allow thick masses of hot polymer to accumulate because they can decompose emitting hazardous gasses. Do not taste, swallow, or chew products. Wash thoroughly after processing. Do not store or consume food in processing area. The major off-gasses from normal melt processing are expected to be water vapor and carbon dioxide. Other trace volatile organic components may also be emitted.

Do not steam sterilize articles. Methyl dianiline can be generated as a result.

### Maximum Handling Temperature

232 °C

## 7.2 Conditions for safe storage, including any incompatibilities

Keep away from sources of ignition -No smoking. Keep container tightly closed in a dry and well-ventilated place away from sources of heat and direct sunlight. Protect from moisture.

Storage temperature: < 30 °C

## 7.3 Specific end uses

No data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

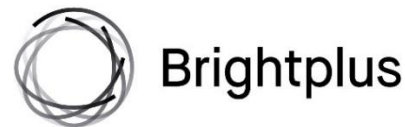
Contains no substances with occupational exposure limits.

### 8.2 Exposure controls

Appropriate engineering controls

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Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.  
Ensure good ventilation of the workstation. Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment.

### Personal protective equipment

#### Eye/face protection

Safety glasses with side shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with Butyl rubber gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

To avoid burns from contact with molten product, use thermal insulating gloves.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. For applications involving mechanical risks with potential for abrasion or puncture, the standards set out in EN 388 should be considered. For tasks involving thermal hazards, the standard set out in EN 407 should be considered.

For continuous contact, we suggest gloves with a minimum breakthrough time of 240 minutes, or > 480 minutes if suitable gloves can be obtained. If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to. For short-term, transient exposure and splash protection, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

#### Body Protection

Long sleeved protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

No respiratory protection needed under normal use conditions. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. When respiratory protection is required for certain operations, Dust mask with filter type FFP2 is recommended. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application.

Use respirators and components tested and approved under appropriate government standards such as EN 149.

#### Environmental exposure controls

Avoid release to the environment.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

a) Appearance	Physical state: Solid Form: Pellet Colour: White
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point	No data available
f) boiling point/freezing point	No data available
g) Flash point	Not applicable
h) Auto-ignition temperature	Not applicable
i) Decomposition temperature	> 230°C
j) Flammability (solid, gas)	Non-flammable.
k) Vapour pressure	No data available
l) Relative vapour density at 20 °C	No data available
m) Relative density	No data available
n) Density	1.2 g/cm <sup>3</sup>
o) Solubility	insoluble in water
p) Partition coefficient n-octanol/water (Log Pow)	No data available
q) Viscosity, kinematic	No data available
r) Viscosity, dynamic	No data available
s) Explosive properties	No data available
t) Oxidising properties	No data available
u) Explosive limits	Not applicable

### 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

The product is non-reactive under normal conditions of use, storage, and transport.

### 10.2 Chemical stability

Stable under normal handling and storage conditions

### 10.3 Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerisation: Will not occur.  
When mixed with air and exposed to an ignition source, dust may burn in the open air or explode if confined.

### 10.4 Conditions to avoid

Above a temperature of: 230°C / 446 °F. Protect from moisture. Avoid raising powdered materials into airborne dust, creating an explosion hazard.

### 10.5 Incompatible materials

Water, humidity.

### 10.6 Hazardous decomposition products

Thermal decompositions or combustion may generate smoke, carbon monoxide, carbon dioxide, nitrogen

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oxides, and other products of incomplete combustion. May also include isocyanates and small amounts of hydrogen cyanide.

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

**Acute toxicity**

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory sensitization**

No data available

**Skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

### 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

No data available

#### 12.2 Persistence and degradability

No data available

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### 12.3 Bioaccumulative potential

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

Components may be harmful to aquatic life with long lasting effects.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Regional legislation (waste)

Regional legislation (waste): Dispose in a safe manner in accordance with local/national regulations.

#### Waste treatment methods

Dispose of contents/container in accordance with licensed collector's sorting instructions

#### Contaminated packaging

Dispose in a safe manner in accordance with local/national regulations. Container packaging may exhibit hazards.

## 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

### 15.2 Chemical Safety Assessment

No data available

## 16. OTHER INFORMATION

For Industrial use only. Not for drug, medical, household, or other uses.

### DISCLAIMER

The above information is presented in good faith and believed to be correct but does not purpose to be all inclusive and shall be used as a guide only. The information in this document is based on the present state of



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our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Brightplus Oy shall not be held liability for any damage resulting from handling or from contact with the above product. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with local laws.