



# Beocycle PE RTM213 OceanIX

## Material Technical Data Sheet

Date of issue: 20/04/2022 Version: 2.1

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

#### 1.1. Product identifier

<b>Product form</b>	: Powder
<b>Name</b>	: Beocycle PE RTM213 OceanIX
<b>Product code</b>	: 9802100213
<b>Application</b>	: Rotomoulding
<b>Composition</b>	: 50% recycled material + 50% virgin material
<b>Origin of end-of-use polymers</b>	: This product contains OceanIX - a range of post-consumer recycled (PCR) raw material originating from end-of-life maritime gear. The maritime gear is collected , cleaned , sorted and re-used by upgrading the material to a higher quality composite.

#### 1.2. Details of the supplier of the material specification sheet

##### Manufacturer

Beologic  
 Jolainstraat 44  
 8554 Sint-Denijs  
[info@beologic.com](mailto:info@beologic.com)

### SECTION 2: Physical, mechanical and thermal properties

#### 2.1. Information on basic physical, mechanical and thermal properties

Properties <sup>(1)</sup>	Method	Typical Value	Unit
<b>Physical</b>			
Physical state		Solid	
Relative density	ISO 1183-1	0,9	g/cm <sup>3</sup>
MFI (190°C, 2,16 kg)	ISO 1133-1	2	g/10min
Coloured in mass		Original colour, no colour added by Beologic	
Colour material		Green	
UV package		No	
Carbon footprint <sup>(2)</sup>	PAS 2050	1,448	kg CO <sub>2</sub> Eq/ kg
Shelf life <sup>(3)</sup>		6	Months
<b>Mechanical</b>			
Tensile modulus	ISO 527	573	MPa
Tensile strenght	ISO 527	24	MPa
Break stress	ISO 527	22	MPa
Elongation at break	ISO 527	744	%
Flexural modulus	ISO 178	778	MPa
Charpy impact strength (Notched 1eA , 23 °C)	ISO 179	17	kJ/m <sup>2</sup>
Vicat softening point (A120)	ISO 306	106	°C
HDT	ISO 75 B	58	°C

(1) Typical properties; not to be construed as specifications.

(2) Carbon footprint calculated by Neutrologic

(3) Only if storage conditions were followed

#### 2.2. Product Carbon footprint

The product carbon footprint helps to define the amount of greenhouse gas emissions generated by a product along its life cycle, it quantifies the ghg-emissions related to the production of our products.

Beologic calculates the carbon footprint of all sales products and this from cradle to gate.

The calculation of the carbon footprint is in accordance with the internationally recognized Greenhouse Gas Protocol Product Standard which is based on the standard ISO-14067 norm and PAS2050.

The carbon footprint is mentioned in our datasheet - by offsetting or compensating the calculated emissions we can present our products as Carbon Neutral compounds. This compensation is according the Verified Carbon Standard – more info via ([www.v-c-s.org](http://www.v-c-s.org)).



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### 2.3. Circularity and ecology

Beocycle PE RTM213 OceanIX is a sustainable compound and it has an impact on our ecology as we avoid plastic pollution of our oceans/ of our seas. We are actively working on circularity as we design this product to be durable and recyclable, depending on the end application you could even further decrease CO2 emissions.

By using Beocycle PE RTM213 OceanIX as raw material choice you directly contribute to further closing the material loops, reducing landfilling, marine pollution and loss of valuable resources.

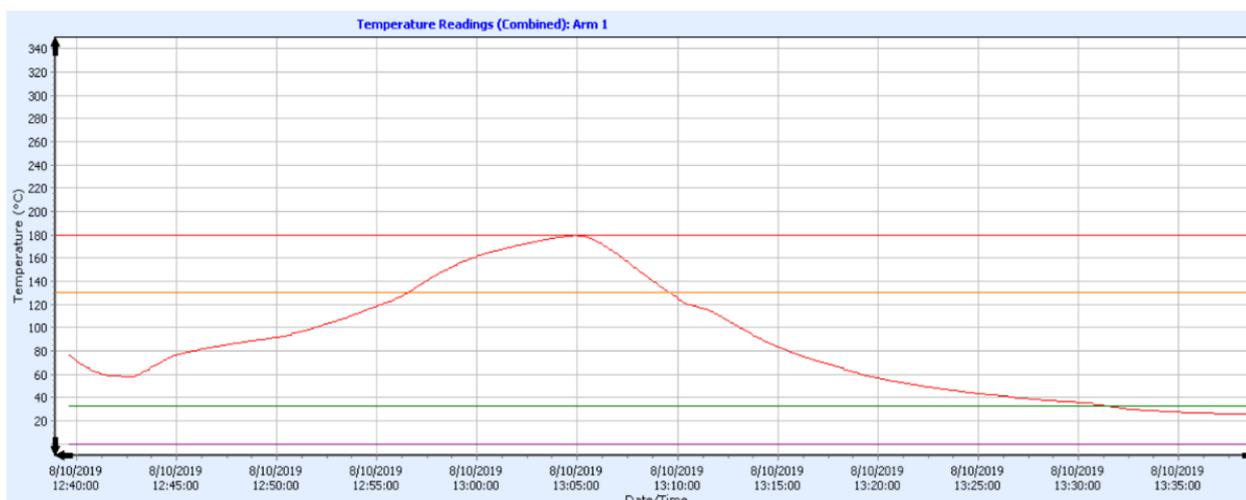
### 2.4. Other information

No additional information available

## SECTION 3: Processing conditions-guidelines

### 3.1. Processing procedure – lab environment:

1. Procedure based on inner mould temperature/inner air temperature (IAT) measured on lab scale.
2. IAT start at 120°C – 130°C and gradually increase with step of 5°C to 150°C – 165°C.
3. PIAT < 175°C.
4. Residence time : depending on application or product fe. 100 gr – 20 minutes.
5. Check energy absorption of the product.
6. Typical temperature flow chart IAT – see chart below.



### 3.2. Processing measurements- lab scale environment

	Beocycle	HDPE	PP	Beograde
<b>Powder pick-up temperature (°C)</b>	65 - 75	70 - 80	100	50 - 55
<b>Optimum PIAT (°C)</b>	165 - 175	180-190	230	175
<b>Demolding temperature (°C)</b>	85 – 90	90	95	40-45
<b>Light transmission</b>	Opaque/Green	Opaque	Transparent	Opaque
<b>Particle size distribution (µm)</b>	500 - 650	500 - 650	500 - 650	500 - 650
<b>Dry flow</b>	Good	Good	Good	Good
<b>Thickness distribution</b>	Excellent	Excellent	Excellent	Excellent

General remark : All moulders should test these products before starting large industrial runs – set PIAT at 175°C - increase or decrease temperature with 5°C according to the achieved mechanical properties.



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### SECTION 4: General advice

#### 4.1. General info

**Beocycle PE RTM213 OceanIX** is compatible with a wide variety of polyolefins some special sequences should be followed:

1. Before production, ensure to clean equipment and check oven temperature to a controlled condition.
2. Vacuum out any hopper/blending or other mixture equipment system to avoid contamination.
3. Introduce **Beocycle PE RTM213 OceanIX** into the equipment at the operating conditions used in step 3.1.
4. Once **Beocycle PE RTM213 OceanIX** is introduced check inner air temperature.
5. At shutdown, clean your equipment/machine with high viscosity cleaning material.

At higher temperature, the dwell time of the material inside the machine shall be reduced to a minimum in order to lower the risk of degradation. Do not leave the material hot inside the machine for long periods as the material will degrade.

#### 4.2. Storage and drying conditions

**Beocycle PE RTM213 OceanIX** is a polymer blend based on recycled HDPE and other polymers so no extra drying conditions are required.

We recommend to store the material in dry conditions below 50°C and protected from UV-light. Improper storage could lead to colour change and degradation.

#### 4.3. Biodegradability and Compostability

Not applicable for this grade only Beograde is a biodegradable brandname of Beologic.

#### 4.4. Recycling

The product is suitable for recycling by methods of shredding and cleaning.

**Beocycle PE RTM OceanIX** is mainly based on a PCR HDPE.

### SECTION 5: Drying and storage conditions

**We recommend drying Beocycle PE RTM213 at maximum 80°C for a period of 2 hours or 60°C in maximum 4 hours.** Don't overheat or dry it longer than recommended. Residual moisture content (> 0.2%) can result in lower melt stability, surface mark or bubble formation during processing.

We recommend to store the material in dry conditions below 50°C and protected from UV-light. Opened (big)bags should be used immediately or adequately sealed back up after use to avoid moisture uptake and have negative effects on the physical properties of the product. It is recommended to use **Beocycle** within a time period of maximum 6 months.

Finished products made from Beocycle should be stored dry and cold. Storage time and lifetime of finished products depends on processing parameters and on storage conditions (moisture, UV radiation ...).