



Give sustainability an  
opportunity  
to smile

**MYNUSCO**  
Biomaterials platform for circular economy

**Biomaterials for toothbrush**

Your earth friendly material choice to make  
low carbon and compostable toothbrushes



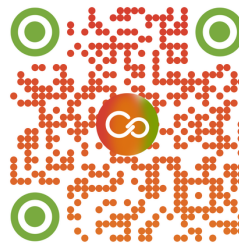
# CIRCULAR

## Toothbrush Material

Use of plastics in toothbrushes has grown in the last few decades due to versatility, lightweight and its affordability. However, making toothbrushes with virgin plastics increase CO2 emissions and depletes fossil resources.

Wood & bamboo that are commonly used to make brushes are not circular, costlier and comes with many limitations compared to plastics.

Using biocomposites made from crop-residue & fast-renewables offers benefits of plastics at a significantly better environment footprint. They are ideal circular solution, from design to its end of life.

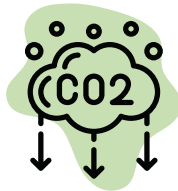


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## MANY BENEFITS

### REDUCE CO2

Biocomposites enable biogenic carbon to be locked in the products. They are made with repurposed material & recycled after use,



### CONSERVE RESOURCES

Replacing fossil resources with crop-residue & fast-renewables enable us to conserve limited resources available.



### HIGH PERFORMANCE

Offers higher strength and stiffness with durability as good as plastics. Grades with weather resistance are available for outdoor use.



### GREAT LOOK & FEEL

Natural fibers visible on the surface of the products provide earthy look. Haptics of the products have natural appeal.



## END TO END SERVICE

### MATERIAL SUPPORT

We support you with material selection & new material development

### PROCESS SUPPORT

We support you with moulding & processing of material at your site

### PRODUCT SUPPORT

Product development and manufacturing support for your diverse needs

### LCA SUPPORT

Proprietary technology to track your product sustainability footprint



## OUR BIOCOMPOSITES

Material Family	Bio Content (%)	Recycle Content (%)	Binder	Tensile Strength (MPa)	Flexural Modulus (GPa)	Elongation (%)	Notched Impact (KJ/M2)	HDT (@ 0.46 MPA, Deg C)	Density	Mold Shrinkage %	Remarks
BioDur - S	20 - 90	0 - 80	Recycled, fossil or bio-based	30 - 60	2.0 - 5.0	2.0 - 6.0	2.5 - 5.0	120 - 155	0.94 - 1.1	0.6 - 1.0	Standard stiffness applications
BioDur - I	20 - 80	0 - 70	Recycled, fossil or bio-based	20 - 40	0.8 - 2.0	4.0 - 15.0	5 - 25	110 - 145	0.94 - 1.1	0.6 - 1.0	Flexible & high impact applications
BioPur - B	40 - 100	-	Fossil or bio-based	10 - 40	0.1 - 4.5	1.5 - 500	4.0 - 24	70 - 130	1.25 - 1.35	< 0.1	Fibers, starch & compostable binders
BioPur - M	20 - 70	-	Fossil or bio-based	14 - 50	0.1 - 4.0	6 - 500	4.0 - 24	70 - 130	1.3 - 1.4	< 0.1	Minerals & compostable binders
BioPur - N	20 - 80	-	Fossil or bio-based	20 - 50	0.4 - 3.0	25 - 550	11 - 55	60 - 80	1.24 - 1.26	< 0.1	Blend of compostable binders

BioDur products are recyclable and BioPur products are compostable at the end of their use. We have more than 1000 grades to choose from. If your product & process needs are unique, we can customize colour, fiber choice (bamboo, husk, wood, starch, etc.), fiber visibility (high, medium, low), MFI & properties.