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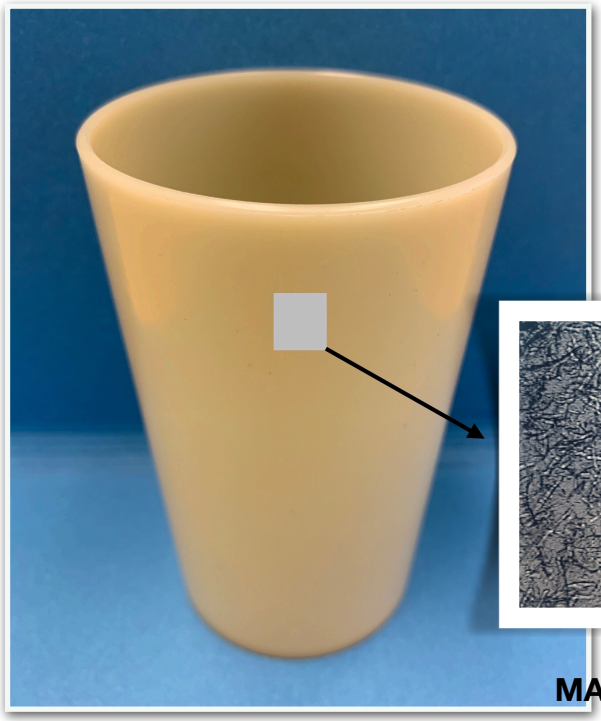
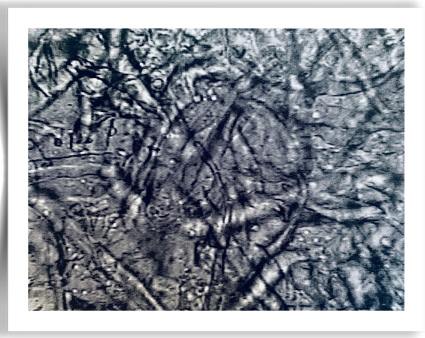
BIO-COMPOSITE - PLA-A *

(CONTAINING 10% MICRO HEMP FIBER and 10% BIO-500 IMPACT MODIFIER)





MAGNIFIED 100 X

MAGNIFIED 400 X

* 100 % BIO CONTENT
  INDUSTRIAL COMPOSTABLE
  COLORABLE
  PRINTABLE
  HIGH SURFACE GLOSS

BIO-COMPOSITE PLA-A TYPICAL PHYSICAL PROPERTIES

. IMPACT- NOTCHED IZOD, ASTM D256 (ft/lbs/inch)	5.2
. TENSILE STRENGTH AT PEAK, ASTM D638 (PSI)	10,718
. ELONGATION at BREAK, ASTM D638, %	18
. FLEXURAL MODULUS, ASTM D790 (PSI)	682,029
. FLEXURAL STRENGTH, ASTM D790(PSI)	20,624
. MFR, (210C, 2.16 kgs) ASTM D1238 (grams/10 mins)	12

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COMPOSITE (PLA-A) vs PLA, COMMERCIAL 25%HEMP FILLED PLA and ABS

PHYSICAL PROPERTIES:

	PLA-A	PLA (1)	COMMERCIAL 25% HEMP FILLED PLA	GENERAL PURPOSE ABS (2)
. IMPACT - NOTCHED IZOD ASTM D256, (ft/lbs/inch)	5.2	0.3	0.63	6.50
. TENSILE STRENGTH at PERK ASTM D638, (PSI)	10,718	9,000	4,068	5,990
. ELONGATION at BREAK ASTM D638, (%)	18	3.5	4.14	> 30
. FLEXURAL MODULUS ASTM D790, (PSI)	682,029	515,000	434,000	377,000
. FLEXURAL STRENGTH ASTM D790, (PSI)	20,624	15,700	13,150	10,400

(1) NatureWorks PLA 3001 D
(2) Ineos ABS Lustran 633

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COMPOUND BASE COLOR :

PLA-A

COMMERCIAL - 25% HEMP FILLED PLA