

Technical Data Sheet

FluidSolids® Biocomposite Coffee Grade

FluidSolids® Biocomposite Coffee Grade is the “food-contact compliant grade” biocomposite developed in Switzerland by FluidSolids® and expressly conceived for coffee-capsule manufacturing. Produced from organic side-streams, fully home-compostable and with outstanding oxygen barrier, it is the environmentally friendly raw material for next generation coffee capsules.

Technical Data †	Test Method	Unit	Value
Physical Properties			
Color	-	-	Black
Shrinkage (Specimen*)	FS-intern	%	0.6
Mass Density (Specimen*)	DIN 53479	g/cm ³	1.4
Bulk Density (Pellets)	DIN ISO 697	g/cm ³	0.6
UV Resistance	ASTM D4674	-	very good
Mechanical Properties*			
Elastic Modulus	DIN- EN ISO 527-1	N/mm ²	3300 ± 100
Flexural Modulus	EN ISO 178, Verfahren A	N/mm ²	3800 ± 200
Max tensile stress	ISO 527-1	N/mm ²	32.7 ± 0.9
Elongation at break in tension	ISO 527-1	%	1.1 ± 0.1
Impact strength	DIN EN ISO 179-1 Charpy	KJ/m ²	5.6 ± 0.5
Barrier Properties			
OTR (23°C - 50% RH)	ASTM F1307	ml/(pack*24h)	0.0001
WVTR (23°C - 50% RH)	ASTM F1249	g/(pack*24h)	<0.005
WVTR (38°C - 90% RH)	ASTM F1249	g/(pack*24h)	0.18147
Microbiology			
Number of yeasts at 25°C	ISO 7954:1999	CFU/surface	<1,0x10 ¹ ; very good
Number of moulds at 25°C	ISO 7954:1999	CFU/surface	<1,0x10 ¹ ; very good
Aerobic colony count at 30°C	EN ISO 4833-1:2013-12	CFU/surface	4,0x10 ¹ ; very good

† Data measured for representative black formulation. Natural formulation features comparable values.

* measured on specimen produced according to DIN EN ISO 3167 and equilibrated in ventilated oven, 24h at 38°C.

Storage Recommendations

FluidSolids® Biocomposite Coffee Grade pellets must be stored in the original sealed aluminum bags at a temperature between -10 °C and 40 °C for a maximum of 12 months. Bags open for processing need to be resealed if not completely used.

Processing

FluidSolids® Biocomposite Coffee Grade is produced in pellet form and is processable in conventional injection molding machine. FluidSolids® Biocomposite Coffee Grade is processed only by certified manufacturing partners. For further information please contact FluidSolids® technical support.



Typical FluidSolids® Biocomposite Coffee Grade pellets

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication.

However, this statement is limited to FluidSolids® Biocomposite Coffee Grade as it leaves production. It is the customer's responsibility to verify compliance with applicable end product requirements under actual and foreseeable conditions of use.

FluidSolids® makes no warranties beyond the description contained herein. Nothing herein shall constitute a warranty of merchantability or fitness for a particular purpose. No liability can be assumed for the use of FluidSolids' products in conjunction with other materials. The information contained herein pertains solely to our material when not used in conjunction with third party materials.