



PRODUCT DESCRIPTION

Aqua Green Barrier Coating is a Biopolymer Dispersion coating, which is recyclable and re-pulpable. It effectively eliminates the need to use traditional wax and polyethylene papers. It is 100% Plastic free, Odor-less. The coating can be utilized on poly free cup stock, Craft and recycled paper to seal the surface from **OIL, Grease and Water**. The Emulsion combination forms a film with the paper fiber under Hot Air Knife drier; which can be recycled in Hydro-pulper without any chemical addition. This product is solvent free and can be used for Direct food application. It is heat sealable with Coated to Uncoated or Coated-to-Coated surface.

Aqua Green Barrier Coating is specially designed to achieve Oil, Grease as well as Water Resistant property to achieve Cobb Value nearing to Zero. This is specifically designed for Cup Stock Paper Board.

Aqua Green Barrier Coating is USFDA 21 CFR 176.170 & 170.180 and RoHS (free of Heavy Metals) certified and also biodegradable when tested with Paper & Board substrates as per Indian Standards IS 17088 : 2008.



FEATURES

- Water Vapor Transmission Rate (WVTR) comparable to poly-coated paper and much superior to waxed paper
- Barrier properties at the end of the line passes as per ASTM F 1249
- Oil and grease resistance passes as per TAPPI T-559 KIT Test
- Certified repulable passes as per according to TAPPI T 240 om-12 Repulpability Testing
(See Table 1)
- Formulated in compliance with FDA Code of Federal Regulations Title 21:
 - 176.170-Components of paper and paperboard in contact with aqueous and fatty foods
 - 176.180-Components of paper and paperboard in contact with dry food
- UNI 11743:2019

Note: Coated papers will produce better physical properties such as burst, tear, tensile strength, elongation, folding endurance, coefficient of friction, and smoothness.

TYPICAL PROPERTIES

Appearance	Milky White to Off-White Viscous Liquid
Non-Volatile Content	55-65%
pH	8.5-9.5
Density	1.04
Solvent Composition	100% Water

Note: Heavier coating weights are suggested for lower WVTR (Water Vapor Transmission Rate)

TYPICAL APPLICATIONS

Aqua Green Barrier Coating can be applied by most common paper roll coaters, including gravure, flexo, air-knife, reverse-roll, etc. Drying temperature is 95°C - 120 °C. Suggested weights are 8-11 lb/ream (3000 sq. Ft.) (8-10 GSM)

PRDOUCT DATA SHEET - AQUAGREEN WATER BASE COATING SERIES



DATASHEET – BARRIER COATING – HEAT SEALABLE

Material Code: WB11015

Ver.1.0

Date: 01.12.21

Document No. – PDS-AG-BC-HS-IN

Web Site: <http://www.amigoindiaent.com>

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Physical Properties	Test Method	Value	Test condition	Units
Physical Appearance	-	Semi Translucent	-	-
Specific Gravity/Density	ASTM D1475	1.04	Water =1	-
Viscosity @ Ford # 4	ASTM D1200	35±3	Ford # 4 @ 30°C	Seconds
Solid content	ASTM D2369	40±2	60 min @ 110±5°C	%
pH	ASTM E70-19	8.5-9.5	@ 30°C	-
Gloss	ASTM 523	20±5	60° Viewing angle	Gloss Unit
Oil Grease Resistance	TAPPI T-559	12	KIT solution	KIT Value
Heat Resistance	ASTM D2485	Pass	≤140°C	
Barrier Properties	ASTM F 1249	Pass	0.52-0.57	(WVTR) g/m2 per day
Deep Fridge Property	ASTM D2243	Pass	-38°C	Hrs.
Anti-Blocking Property	ASTM D4946	Pass	50 °C # 4hrs @ 5 Kg	-

WATER VAPOR BARIER PROPERTIES (ASTM E 96)

	Aqua Green Barrier Coating – Heat Sealable	Poly-coated Paper	Waxed Paper
WVTR* (g/hour•m ²)	0.52-0.57	0.47-0.71	6.6 -7.1

*Tested according to ASTM E-96, 73 °F (23 °C), 50% RH Example test ranges for Aqua Green Barrier Coated Paper (45# 3msf natural Craft paper, 7 GSM coating), a comparable polyethylene coated paper (40 GSM 3msf paper, 6 GSM PE coating), and commercial waxed paper.



TABLE 1. REPULPABILITY ANALYSIS

Results*	Trial 1	Trial 2
% of Rejects	13.6	13.2
% Fiber Yield of Sample (85%)	86.2	86.5
SUMMARY		
Operational Impact	Pass	Pass
Yield	Pass	Pass



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Material Certifications	Third Party Certification	Internal Certification
REACH	YES (INTERTEK)	
RoHS	YES (TUV)	
EN71/3	-	YES
21 CFR 175.300	YES (TUV)	
US FDA 21 CFR 175.170	YES (TUV)	
US FDA 21 CFR 175.180	YES (TUV)	
PTHALATE FREE	-	YES

Notes

Recommended Use: Stir well before use. Do not contaminate the coating with cleaning solution or other type of coatings. Check the viscosity before use and adjust the viscosity according to the application process and machine types with DM water (preferably).

Drying Process: For proper film formation; Air Knife Drying will improve the coating curing. A good vapor extraction is required.

Cleaning Process: Clean machines and tools immediately with water. Dried coating residues can be removed with mixture of IPA and Water.

Storage Condition: Do not store below 4°C and more than 35°C.

Self-life: 6 months from the date of Manufacturing.

** **FDA Compliant:** This coating complies with the following FDA regulations found in the US Code of Federal Regulations Book 21 175.105 - Adhesives.

This product is cleared for use in accordance with 21 C.F.R. 175.105.

175.300 - Resinous and polymeric coatings.

For use only in contact with food types IV – A, V, and VII (Table 1) under use conditions E through G (Table 2); section 175.300 paragraph (d). It may be used with food types VIII without use restrictions. The coating, in contact with food in its finished form, must meet the extractive limitations prescribed in paragraph (c) of this section.

176.170 - Components of paper and paperboard in contact with aqueous and fatty foods.

For use only in contact with food types IV – A, V, and VII (Table 1) under use conditions E through G (Table 2); section 176.170 paragraph (C). It may be used with food types VIII and IX (Table 1) without use temperature restrictions. May be used as a component of the food contact surface of paper and paperboard, provided that the food contact surface of the paper or paperboard complies with the extractive limitations prescribed in paragraph (c) of 176.170.

176.180 - Components of paper and paperboard in contact with dry food.

This product is cleared for use in accordance with 21 C.F.R. 176.180

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**Note: - ASTM - American Society for Testing Materials. All test methods mentioned above are as per ASTM only.