



I'd like to
come back as
a diet planner

Decovery® CQ 6010

The barrier coating
you can trust to perform

Recyclability, with test scores that underline
its performance



Decovery® CQ 6010 is a partially-biobased barrier coating resin, that delivers high MVTR-performance for manufacturers and brand owners looking to create recyclable paper packaging.

It has been rigorously tested to ensure it delivers the consistent quality that brands and consumers demand.

How we conducted the tests

These products and layer combination are tested:

- CQ 6010
- 1st layer BT-62 + 2nd layer CQ 6010
- Fossil-based alternative
- PE laminated paper

These layer build-up are applied:

- 5 gsm dry on 90 gsm paper (2 x 2.5 gsm dry when primer is applied)
- 10 gsm dry on 214 gsm paper (2 x 5 gsm dry when primer is applied)

These two different paper substrates were used:

- 90 gsm
- 214 gsm

Key results for Decovery® CQ 6010

1. Water barrier (COBB)

Cobb results	1	2	3	4
	Covestro resins			Benchmark
Formulation	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	PE laminated paper
5 gsm dry (90 gsm paper) - Cobb 60s	0.3	0.8	0.6	
10 gsm dry (214 gsm paper) - Cobb 60s	0.2	0.2	0.4	0.0
5 gsm dry (90 gsm paper) - Cobb 1800s	1.1	1.0	1.0	
10 gsm dry (214 gsm paper) - Cobb 1800s	1.6	1.0	1.0	0.2

2. Moisture Vapore transmission rate barrier (MVTR)

MVTR results	1	2	3	4
	Covestro resins			Benchmark
Formulation	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	PE laminated paper
5 gsm dry (90 gsm paper)	22	85	22	
10 gsm dry (214 gsm paper)	11	71	7	4

Conditions: Coating dried 30" at 80 °C and MVTR determined with **23 °C and 85% relative humidity**.

Tested with Mocon machine.

3. Grease resistance (olive oil, coconut oil and KIT test)

Grease resistance with olive oil (spot test)				
Grease resistance results				
	1	2	3	4
	5 gsm dry on uncoated side		90 gsm, dried 30" @ 80°C	PE laminated paper
Formulation	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	Uncoated
1 hour	4-5	4-5	5	Not tested
2 hours	4-5	4-5	5	Not tested
4 hours	4	4-5	5	Not tested
24 hours	1	4-5	5	Not tested
48 hours	1	4-5	5	Not tested

Grease resistance with olive oil (spot test)				
Grease resistance results				
	1	2	3	4
	10 gsm dry on 214 gsm, dried 30" @ 80°C			PE laminated paper
Formulation	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	Uncoated
1 hour	5	4-5	5	5
2 hours	5	4-5	5	5
4 hours	5	4-5	5	5
24 hours	5	4-5	5	5
48 hours	5	4-5	4	5

Result	Description
5	No change or damage visible
4	Slight discoloration or gloss difference. No change in structure of test coating
3	Some discoloration or gloss difference. No change in structure of test coating
2	Much discoloration or gloss difference. Some change in structure of test coating but not damaged
1	Much discoloration or gloss difference. Change of structure of test coating
0	Completely damaged coating

Grease resistance with coconut oil				
Grease resistance results				
	1	2	3	4
	5 gsm dry on uncoated side		90 gsm, dried 30" @ 80°C	PE laminated paper
Formulation	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	Uncoated
15 min	5	5	5	Not tested
1 hour	4	5	4	Not tested
2 hours	4	5	4	Not tested
4 hours	4	5	4	Not tested
24 hours	4	5	4	Not tested

Grease resistance with olive oil (spot test)				
Grease resistance results				
	1	2	3	4
	10 gsm dry on 214 gsm, dried 30" @ 80°C			PE laminated paper
Formulation	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	Uncoated
15 min	5	5	4	5
1 hour	4	5	4	5
2 hours	4	5	4	5
4 hours	4	5	4	5
24 hours	4	5	4	5

Result	Description
5	No breakthrough
4	Number of breakthroughs
3	Some slight breakthrough
2	Partial breakthrough
1	Almost all-over breakthrough
0	Complete breakthrough

KIT test	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	PE laminated paper
5 gsm dry, 90 gsm paper kit max value	12	12	12	Not tested
10 gsm dry, 214 gsm paper kit max value	12	12	12	12

4. Blocking test

	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	PE laminated paper
5 gsm dry, 90 gsm paper, A-A ¹	4	4	4	N/A
5 gsm dry, 90 gsm paper, A-B ¹	5	5	4	N/A
10 gsm dry, 214 gsm, paper A-A ¹	5	5	4	4
10 gsm dry, 214 gsm, paper A-B ¹	5	5	4	5

- Exposed to 1 kg/cm² for 16 hrs. on 52 °C
- Rating goes from 1 to 5, where 5 is excellent

5. Coefficient of friction (cof) test

	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	PE laminated paper
5 gsm dry, 90 gsm paper A-A ¹ Static	0.27	0.50	0.43	N/A
5 gsm dry, 90 gsm paper A-A ¹ Dynamic	0.30	0.45	0.42	N/A
5 gsm dry, 90 gsm paper A-B ¹ Static	0.83	0.62	0.57	N/A
5 gsm dry, 90 gsm paper A-B ¹ Dynamic	0.40	0.42	0.28	N/A
10 gsm dry, 214 gsm paper A-A ¹ Static	0.41	0.44	0.68	0.54
10 gsm dry, 214 gsm paper A-A ¹ Dynamic	0.36	0.33	0.25	0.50
10 gsm dry, 214 gsm paper A-B ¹ Static	0.67	0.72	0.58	0.51
10 gsm dry, 214 gsm paper A-B ¹ Dynamic	0.35	0.36	0.22	0.47

6. Heat sealability

	CQ 6010	Fossil based alternative	BT-62 + CQ 6010*	PE laminated paper
5 gsm dry, 90 gsm paper, A-A ¹ (°C)	No seal	130	160	Not tested
5 gsm dry, 90 gsm paper, A-B ¹ (°C)	No seal	No seal	No seal	Not tested
10 gsm dry, 214 gsm, paper A-A ¹ (°C)	140	120	180	120
10 gsm dry, 214 gsm, paper A-B ¹ (°C)	140	160	160	160

Heat sealability dried 30" @ 80°C, 1 day after applying, max temperature. A/A: Seal pressure 900N, 1 second contact time. Jaw size and type 15 x 1 cm, flat jaw., A/B seal pressure 450N, 0.5 second contact time. Jaw size and type 15 x 1 cm, flat jaw.

*Pure CQ 6010 seals at relatively high temperature and this can be improved via formulation to meet the more demanding market needs.

More information

If you would like more details on these test results,
contact our printing & packaging team:



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¹Please see the "Guidance on Use of Covestro Products in a Medical Application" document.

Edition: March 2023