Food Contact PCR Resin
Frequently Asked Questions

What Revolution recycle products are appropriate for food contact applications?

- Our Letter of Guarantee and information below applies to the following PCR-LLDPE resin grades:
  - Encore W4041F, Encore W4041FG

Under which specific food contact conditions can Encore W4041F and W4041FG be used?

- Food types under Conditions of Use (COU) B through H, as described in 21 CFR 177.1520 Tables 1 and 2 based on a December 21, 2021 FDA Letter of No Objection.

What percentage of Encore W4041F and W4041FG can be used in the manufacture of a food contact product for food types under COU B through H, as described in 21 CFR 177.1520 Tables 1 and 2?

- The article can be made with up to 100% content of Encore W4041F and W4041FG

What are other performance characteristics which I can expect from Encore W4041F and W4041FG?

- Encore W4041F and W4041FG are white in color
- Standard performance ranges for Encore W4041F and Encore W4041FG:

Melt Index	ASTM D-1238	0.30-0.60 g/10min
Density	ASTM D-792	0.9360-0.9480 g/cc
Ash Content	ASTM D-5630	≤ 3%

What is the specific composition of Encore W4041F and W4041FG?

- 98% 1-Hexene, polymer with ethylene (CAS-No.) 25213-02-9, 2% Titanium Dioxide (CAS-No.) 13463-67-7
- May or may not contain Anti-oxidant and UV additives
  - UV < 0.12%
  - AO < 0.06%
  - Both additives (UV and AO) are approved for food contact in the concentrations present in Encore W4041F and W4041FG

Where do I find a copy of Revolution's FDA letter of no objection?

- Revolution has received a positive response to Prenotification Consultation (PNC) 002665
- FDA reference: https://www.cfsanappsexternal.fda.gov/scripts/fdcc/?set=RecycledPlastics

What is Revolution doing to make sure it's PCR-LLDPE continues to meet food contact standards (and beyond)?

- Revolution regularly conducts third party testing to ensure the PCR-LLDPE material is suitable purity to comply with 21 CFR 177.1520 (Section C specification for Olefin Polymer line 2.1, Density 0.85-1.00, Maximum extractable fraction 5.5 pct at 50 deg.C (expressed as percent by weight of the polymer) in N-hexane at specified temperatures. Maximum soluble fraction 11.3 pct at 25 deg.C (expressed as percent by weight of polymer) in xylene at specified temperatures.)
- Revolution regularly conducts third-party testing to ensure the sum of the incidental concentration levels of lead, mercury, cadmium and hexavalent chromium present does not exceed 100 parts per million by weight in accordance with the Model Toxics in Packaging Legislation.
- Revolution conducts third party testing to evaluate fluorochemisty in its process and materials for the purpose of minimizing Per- and Polyfluoroalkyl Substances (PFAS). We also require PFAS statements from our raw material suppliers.
- Revolution conducts regular third-party testing to evaluate residual pesticides.

How does Revolution's Encore W4041F and W404FG meet food contact requirements given it is produced from post-consumer film waste?

- The used film we recycle to make Encore W4041F and W4041FG is originally produced by Revolution. The film was purchased by our customers, sold to end users where it served its intended use. Revolution then collects the discarded film rolls directly from the end user. This gives us chain of custody on material inputs and the ability to confirm source segregation. We also conduct regular third-party testing as discussed above.

Additional information:

- These FAQ only apply to PCR-LLDPE resin grades, Encore W4041F and Encore W4041FG ("PCR Resin Grades") as of the date of delivery to or pick up by customer, or to customer's agent. Once the customer and/or its agent take possession of the PCR Resin Grades, this statement does not apply to defects that result from transportation, handling, misuse, improper storage, repackaging, alteration, or incorporation into other products. This statement shall not extend to cover the responsibilities of a distributor where the PCR Resin Grades are transferred in bulk or repackaged.
- This statement shall not apply where the PCR Resin Grades become adulterated or misbranded within the meaning of the Food, Drug and Cosmetic Act (the "Act"), or become an article which may not, under the provisions of section 404 or 505 of the Act, be introduced into interstate commerce.
- This statement shall be in effect for a period of two years from December 21, 2021, or earlier if Revolution revokes this letter or provides a subsequent update concerning the information in this letter, or there is a relevant change in federal or state law or regulation.
- This guarantee shall not apply where the PCR Resin Grade is not used in accordance with the Conditions of Use described above or otherwise not in accordance with the Act and applicable federal and state laws.

This letter shall not render Revolution liable for any incidental, indirect, or consequential damages.

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