

## APR's Preferred Design Recognition Review Program

### **NIR detectable Dark color concentrates for HDPE and PP packages** Program Agreement and Manufacturing Change and Records Agreement

#### General

**Dark color concentrates for HDPE and PP packages are candidates for review and recognition with APR's Preferred Design Recognition Review Program effective October 15, 2022.**

#### Notes:

- Scope of this application is limited to a family of black, or dark, color concentrates. Packages utilizing color concentrates are not considered in this application.
- Scope is further limited to use of a color concentrate in HDPE and PP virgin resins
- The review is suitable for colors that have an L value < 40 or a NIR reflection spectrum that is on average less than 10% as described in the APR's Sort-S-01 NIR snap test document.

#### Preparation for the application:

APR will not ask for, nor require any confidential color formulation or end customer information from the color supplier.

1. The color supplier designates a family name for their NIR detectable colorant family.
2. The color supplier designates a listing of pigments that are employed to make the color formulations. APR understands that this listing is confidential and proprietary to the color supplier, **the listing does not have to be revealed to the APR**. APR just needs to know there is a named list and that any colors in the family are developed from the designated pigment listing. The listing can be by color index number so there is flexibility in supplier of a given pigment.
3. A "control" color formulation will be made. This is the darkest possible shade in the family employed at the highest possible let down ratio with the lowest level of NIR reflection that will be qualified. Let down ratio is the weight of color concentrate used per 100 kgs of virgin plastic. The control color formulation will be made with all the individual pigments in the designated list. TiO<sub>2</sub> can be on the list but does not need to be tested or included in the control.  
Note: All shades of NIR identifiable colors are likely to be made by mixing a small number of individual pigments. Each color company will identify those that they prefer for this application. It is a small number because cost and technical function will lead suppliers to have a controlled listing. Color formulations (Hues) are made by mixing pigments with shades from around the color wheel. The shade is adjusted by using more of one shade than another. The Hue is defined by adjusting the toners within the formula. For example, a greener shade is made by adding green and/or taking out red pigment. Alternatively, a greener shade can be made by adding

yellow and blue. The color can be made lighter by adding titanium dioxide, or just by using a lower concentration of color concentrate.

4. The control color formulation will be tested in a container using APR's Sort-B-01, the NIR sort potential test, and will meet the preferred guidance given in the test. The container can be tested without labels or closures.
5. The color concentrate supplier may test a bottle that is known to sort well in virgin and light colors so that rolling or small size does not impact the sort test. The test is intended for detection of base resin in this case, not ejection accuracy.
6. The control sample will be measured on a laboratory bench top or hand-held reflectance NIR spectrophotometer. The control sample will be retained and used in any future measurements and comparisons of new color formulations.
7. Any color formulation in the color family then will:
  - Be made from the designated pigment list and TiO<sub>2</sub>.
  - Have a NIR reflection value no less than the control over 1300 to 1900 nm
  - APR Snap Test identifies 1400nm – 2200nm range for definition/acceptability – Verification required.
  - Have a maximum Let Down Rate (ldr) % that is confirmed to meet this NIR reflection requirement.
  - Those participating in the PDR program will agree to keep such records for each color formulation added to the family.
8. If the color company identifies a new pigment and wants to add this into the designated listing of pigments used to make NIR detectable colors. APR's approach is that a petitioner will agree that, as part of participation in the PDR Program, any new pigment added in is qualified with the Sort-B-01 test as the definitive test for suitability. The concentrate supplier will agree to maintain records with data and a report that the test was successfully completed.
9. It will not be necessary to conduct any special testing of pigments if a CI numbered pigment from Supplier A is being replaced with the same CI from supplier B.

# Preferred Design Recognition Agreement

This Agreement (“Agreement”) is made by and between the Association of Plastic Recyclers (“APR”), a District of Columbia corporation having its principal place of business at 2050 M Street NW, Washington, DC 20036, and \_\_\_\_\_ (“Supplier”) its principal place of business at \_\_\_\_\_ as of \_\_\_\_\_ (“Effective Date”).

**WHEREAS**, the APR Design® Recognition Program for Preferred Design Recognition (“PDR Program”) allows materials, components, and complete packages used in PET, HDPE, PP and PE film packaging to be recognized as meeting APR Preferred Guidelines for Recycling; and

**WHEREAS**, the parties desire to enter into an agreement governing Supplier’s participation in the recognition program.

**NOW THEREFORE**, in consideration of the mutual covenants and obligations set forth herein, the parties agree as follows:

1. **APR’s PDR Review** is an engineering assessment of the technical compatibility of either a package design feature, or a complete package, with today’s plastics recycling processes. Recognition of an item does not qualify the item to be described or marketed as recyclable. APR’s complete Definition of Recyclability can be found [HERE \(https://plasticsrecycling.org/recycling-definitions\)](https://plasticsrecycling.org/recycling-definitions). Additional critical aspects of the package, beyond technical compatibility, must be considered when making recyclability claims to the public and marketing a product. These may include consumer access to recycling, specific container design features, and the consideration whether the container is commonly accepted by the recycling industry to be sorted correctly into a marketable bale.
2. **Voluntary Participation** – Supplier acknowledges that participation in the Program is voluntary.
3. **Non-Exclusive** – Supplier acknowledges that this Agreement is non-exclusive, and APR may enter into this agreement with other parties.
4. **Future Obligation** - Supplier is under no obligation to submit future applications.
5. **Effective Date and Duration** – This agreement shall take effect upon its execution and shall terminate three (3) years from the effective date unless otherwise terminated or amended pursuant to this Agreement.
6. **Fees** – Supplier agrees to promptly pay to APR an application fee within thirty (30) days after execution of this Agreement. Supplier acknowledges that review of Supplier’s application will not commence until the application fee is received.

7. **Indemnification** – APR and Supplier (each, as applicable, the “Indemnifying Party”) agree to indemnify, defend and hold the other party (each, as applicable, the “Indemnified Party”) harmless against any liability relating to property damage, personal injury or death of the Indemnified Party, its officers, directors, employees, agents or invitees, to the extent resulting from the negligence or intentional misconduct of the Indemnifying Party, or that of such party’s officers, directors, employees, agents or invitees, in connection with this Agreement; provided, however, that neither APR nor Supplier shall have any liability under this Agreement for special, indirect, incidental, consequential, punitive or exemplary damages, including, but not limited to, lost profits, even if such party has knowledge of the possibility of such damages, and regardless of whether the Indemnified Party’s claim is based upon breach of contract, breach of warranty, negligence, strict liability, or any other legal theory. This provision shall survive the expiration or earlier termination of this Agreement.
8. **Participation and Testing**
- a. All testing conducted under the Program will be performed in accordance with the most current versions of the Program Operating Procedures, and published test protocols
  - b. Eligible products must be compatible with the APR Design® Guide for Plastics Recyclability Guidelines.
  - c. Supplier is obligated to conduct testing as indicated in the Program Operating Procedures at their own expense.
9. **Confidentiality of Information** – The information requested in the APR Design® Recognition Program for Preferred Design Recognition Review is the type of information that is not considered confidential under the Food and Drug Administration’s (FDA’s) regulations (e.g., 21 C.F.R. § 170.102). Therefore, such information is not entitled to confidential protection. With respect to any other information voluntarily supplied, the Supplier waives confidentiality protection for all such submissions.
10. **Names and Trademarks** —
- a. Except as provided in this agreement, neither party shall use the name, badge, or other trademarks or service marks (“Marks”) of the other party without written permission.
  - b. Supplier grants APR permission to publicly release the decision to grant recognition, APR agrees not to publicize decisions to not grant recognition; however, APR reserves the right to respond to public inquiries on the results of a recognition review. An application that is withdrawn prior to the conclusion of a review will be indicated to be “withdrawn” in response to public inquiries.
  - c. For purposes of publicly releasing the decision to grant recognition, Supplier authorizes APR to use the Supplier’s name and trademark in a listing of Suppliers whose product or products have been recognized under the Program. This listing will be maintained on the APR’s web site.

**11. Termination –**

- a. Either party may terminate this Agreement at any time and for any reason provided that written notice is sent at least thirty (30) days prior to the effective date of termination.
- b. This Agreement may be terminated immediately by APR upon the default or a breach of the Agreement by Supplier.

**12. Arbitration –** The parties agree that disputes arising under this Agreement shall be settled through the appointment of an arbitrator selected by the parties. Should the parties not be able to agree on an arbitrator, each may select one arbitrator, and the two arbitrators will choose a third. Arbitration will be conducted under the Commercial Rules of Arbitration of the American Arbitration Association in the District of Columbia, and any appropriate statutes of limitations will also apply to claims for arbitration. The parties agree that arbitration will be the sole and exclusive remedy.

**13. Entire Agreement and Amendments –** This Agreement constitutes the entire agreement between the parties, relating to this subject. Amendments to this Agreement must be in writing and signed by both parties.

**14. Severability –** If any provision(s) of this Agreement or the application of them to either party is held illegal, unenforceable, or otherwise invalid by government promulgation or court decree, such holding shall not affect the other provisions or applications of this Agreement which can be given effect without the invalid provision, provided that the parties shall promptly negotiate in good faith to make adjustments in this Agreement as may be necessary to make it fair and equitable to both parties.

**15. Controlling Law –** This Agreement shall be governed by and construed in accordance with the internal laws of the District of Columbia, without application of the principles of conflicts of law.

**16. Headings –** The headings of the paragraphs and subparagraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute a part hereof.

**17. Notice –** Any notice or communication required to be given or permitted under this Agreement shall be sent by certified or registered mail, return receipt requested, to the following persons:

**The following people are designated as primary contacts for this application:**

**For APR:**

\_\_\_\_\_APR Program Administrator

\_\_\_\_\_telephone

\_\_\_\_\_email

**For Supplier:**

\_\_\_\_\_APR Program Administrator

\_\_\_\_\_telephone

\_\_\_\_\_email

Either party, by written notice to the other conforming with this paragraph, may change the person or persons designated to receive notices on behalf of that party and/or the address or addresses to which any notice is to be sent.

# Manufacturing Change and Records Agreement

## Introduction

We expect that companies will submit data and successfully obtain APR Preferred Design Recognition for a given mix of pigments that allow for NIR detection of a package. It is highly likely that after receiving that initial recognition, something will change! Here are common situations that are anticipated based on experience:

- New raw material becomes available that provides improved cost/performance.
- A new raw material is required to meet a supply situation.

This Manufacturing Change Agreement details the procedures and documentation that a company that has received PDR recognition will maintain to allow evolution in the use of new materials and still market finished products using those new materials as Meeting Preferred Guidance.

## New pigments

Performance of new pigments will be confirmed employing SORT-B-01 to confirm that the new material does not impact NIR sort performance.

A new control formulation and sample will be designated for each resin, PP or HDPE, which has achieved recognition.

It is not necessary to conduct testing for the APR when a pigment with a given color index number is being replaced with an alternate pigment having the same color index designation.

## Documentation requirements

Suppliers will maintain laboratory notebook records and reports that can be reviewed by APR staff. APR staff will generally not ask to review or audit these test results and records. We are relying that those who have received Recognition will follow these agreed procedures on their own as part of good manufacturing practice.

But should there be reason for concern that a color concentrate being marketed as Meeting Preferred Guidance may not in fact meet guidance criteria, APR will bring that concern to the attention of the supplier. APR may become aware of possible performance weaknesses through:

- Occasional audits of products performed by the APR.
- Reports from others in the supply chain who might evaluate product recycling performance.
- Reports from MRF's or reclaimers who might observe sortation results for a given package that are not satisfactory.

Should APR contact a company with PDR Recognition, and the supplier is not able to provide records supporting a materials change, the APR and the supplier will co-operate to find a mutually agreeable remedy. However, it is understood that there may be cases where the remedy is that APR removes a given product from the PDR Recognition Program.

Notification to the APR

A company can make their own decisions to change a material providing there is test data supporting technical equivalence of the new material, and a record of the change is maintained for inspection if necessary. There is no need to notify APR of these changes immediately when they are made.

PDR Recognition for a given product is maintained for a three-year period. The three-year term can be renewed for a new three-year term by mutual agreement of the supplier and the APR. This three-year term renewal is an opportunity for suppliers to refresh documentation description details of the PDR Review for their product.

In the event APR Guidance changes

Should APR Guidance change after a supplier receives PDR Recognition, these changes will not impact PDR Recognition during the three-year period of the Recognition.

Should there be Guidance changes that are favorable to the supplier, the supplier can request that APR amend the Recognition letter and web site posting to reflect that favorable change.

**IN WITNESS WHEREOF**, the parties have duly executed this Agreement as of the Effective Date. This Agreement may be executed in counterparts, which together shall constitute one and the same instrument, and by receipted facsimile.

**APR**

**Supplier**

By:

By:

Stephen Alexander

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President & CEO

\_\_\_\_\_

The Association of Plastic Recyclers (APR)

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