U.S. PLASTICS PACT™

PCR Goals by Format Guidance



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OVERVIEW

Increasing the use of postconsumer recycled (PCR) content is a critical component of advancing circularity for plastic packaging, creating demand pull and incentivizing the collection and recycling of postconsumer plastic packaging. Without adequate PCR content use, collected materials may ultimately be landfilled rather than recycled.

The PCR Goals by Format tool was developed by the U.S. Plastics Pact to provide packaging practitioners and other stakeholders with format-specific guidance on PCR content incorporation, presenting percentage ranges seen in the market alongside key challenges and nuances that shape what is technically and commercially feasible. This document reflects market and technical conditions as of July 2026; the PCR landscape is evolving rapidly and will warrant periodic reassessment.

APPROPRIATE USE OF THIS TOOL

This tool is a resource for companies identifying where they could begin incorporating, or increase the use of, safe, verified, North American–domestic PCR in their packaging to support the advancement of the recycling system and compliance with applicable regulations. The ranges are intended to inform internal target-setting and strategy development and should be applied with the full context of the accompanying guidance; they should not be considered an expectation of U.S. Plastics Pact Activators, nor a recommendation for policy (such as PCR mandates). The tool shows what is possible, not what can be guaranteed.

Progress in increasing the use of PCR is likely to be incremental as the system improves. Demand incentivizes investment, and investment is needed to recycle more plastic packaging, and particularly to achieve higher quality grades such as food-grade PCR content. Companies can use this guidance to identify a starting point and build incrementally over time as processes and infrastructure improve.

USPP supports increasing the use of safe, verified PCR where technically and economically feasible and where it improves circularity outcomes. This tool does not constitute partner consensus in support of advancing binding federal PCR requirements before system readiness has been demonstrated. PCR incorporation is also one of several pathways to improved packaging circularity and should be considered as part of a broader strategy rather than a standalone objective.

Use of this tool does not guarantee regulatory compliance; companies should consult internal legal counsel to confirm whether and how PCR inclusion satisfies applicable requirements.

HOW TO INTERPRET THESE RANGES

PCR percentage ranges in this tool represent what is currently achievable given real-world constraints, not uniform targets applicable to all applications within a format. Achievable percentages vary meaningfully depending on factors including end-use application, food contact requirements, layer structure, resin grade, converter capabilities, supply chain access, and manufacturing and end-use process requirements, such as filling temperatures (frozen, refrigerated, ambient, hot fill, and retort) and end-use conditions (microwave and ovenable applications) that impose constraints on resin performance. The accompanying challenges and nuances in column D contain essential context not captured by the ranges alone and should be consulted before applying them. Where supply constraints exist, organizations are encouraged to start at the lower end of the applicable range and build over time, rather than delaying action entirely.

Several formats contain subcategories, or variables such as gauge, layer structure, or food contact status, where the achievable range differs substantially within the same overarching format. These distinctions are noted in the guidance rows and should be considered before applying ranges in planning or standard-setting contexts.

GENERAL CHALLENGES AND NUANCES

Several challenges apply broadly to PCR integration regardless of format or application. Cost, both to produce PCR material and relative to virgin resin, remains a persistent barrier, with price dynamics influenced by factors such as production scale, policy conditions, and broader market trends. Color availability and variation are near-universal constraints; achieving clear, white, or brand-specific colors requires additional processing or colorant that may affect recyclability. Material quality and variability, including mechanical properties, melt flow consistency, and contamination levels, vary by polymer, source stream, and recycler, and affect what percentages are technically achievable. Supply availability differs significantly by polymer: some materials benefit from developed recycling infrastructure, while others remain limited and variable.

Many formats face supply constraints that may make technically achievable percentages difficult to source consistently at scale. Food contact compliance is a binding constraint for direct food-contact applications, requiring FDA source control and decontamination validation (typically via a No Objection Letter) that not all recycling processes have obtained; format- and application-specific details are noted in the guidance rows.

KEY ASSUMPTIONS

The ranges reflect current recycling pathways and commercially available PCR supply, informed by USPP Activator and expert input, industry data points gathered through stakeholder engagement, and desk-based research. They represent a synthesis of practitioner knowledge and available published data rather than a statistically representative market survey. Physical and chemical recycling may allow higher incorporation rates for certain formats, particularly food-contact applications, but supply, cost, and applicable regulatory conditions must be considered. In several formats, the binding near-term constraint is supply availability rather than technical feasibility; these cases are flagged in Column D.

COLUMN-BY-COLUMN GUIDE

Column A, Application

Contains three types of rows: Format header rows identify the overarching packaging format and show the percentage of PCR reported in USPP's 2023 Annual Report. CA SB 54 sub-rows identify the corresponding California SB 54 category for reference. Application rows identify the specific end-use within each format. PCR dynamics can differ substantially across applications within the same format; read at the application level.

Column B, Unique Challenges / Nuances to Consider

Application-specific factors that affect what PCR percentages are realistically achievable. General challenges that apply across all formats (cost, color, supply availability, material quality, and food contact compliance) are addressed in the accompanying Executive Summary. Empty cells indicate no additional application-specific nuances apply.

Columns C, D, and E: Current State (2026/2027)

The range of PCR incorporation rates currently seen in the market for each application:

- **Column C, Starting Point:** Where organizations beginning to incorporate PCR are typically starting today.
- **Column D, On Average:** What a committed organization can currently achieve under typical supply and commercial conditions.
- **Column E, Top Tier Range:** What leading organizations are achieving today.

Column F, Physical or Chemical Recycling May Enable Increased PCR Incorporation

An "X" in this column indicates that PCR sourced through physical or chemical recycling processes may enable higher recycled content levels than those shown in the chart, particularly in food-contact packaging applications. This designation is not a guarantee, as achievable levels depend on feedstock availability, regulatory acceptance, economics, and performance requirements. All percentage ranges in this tool reflect mechanical recycling pathways; where marked, physical or chemical recycling may offer additional potential beyond those ranges.

Column G, 2028 Goal (On Average)

The on-average PCR incorporation rate USPP is working toward for this application by 2028, based on anticipated supply and infrastructure development.

Column H, 2030 Goal (On Average)

The on-average rate USPP is working toward by 2030. Goals reflect ambition and expected trajectory; they are not requirements or guarantees.

PCR GUIDANCE BY FORMAT AND APPLICATION

*All figures are % PCR. Each format has a header band showing its CA SB 54 category and its percentage of PCR as reported in the 2023 Annual Report. An "X" marks applications where physical or chemical recycling may enable increased PCR incorporation. * and ** refer to the notes at the bottom.*

APPLICATION	UNIQUE CHALLENGES / NUANCES TO CONSIDER	CURRENT STATE			PHYSICAL OR CHEMICAL RECYCLING MAY ENABLE INCREASED PCR INCORPORATION	2028 GOAL (On Average)	2030 GOAL (On Average)
		Starting Point	On Average	Top Tier Range			
PET Bottle						**Percentage of PCR in 2023 Annual Report: 30%**	
CA SB 54 category: PET (#1) - Bottles, Jugs and Jars (Clear/Natural) + (Pigmented/Color)							
Beverage	FDA LNO required for food contact; rPET supply most developed of any category; strict clarity and color requirements; hot fill applications limited due to crystallization behavior of PET	15	25	50-100	X	40	60
With Barrier	Multilayer and coated barrier structures may affect recyclability; mechanical PCR incorporation may impact barrier performance in active barrier configurations	15	15	50	X	30	50
Food Contact	Be aware that the material is appropriate for its Condition of Use as listed on its LNO; hot-fill applications: max PCR approximately 30% due to intrinsic viscosity degradation with reprocessing	15	25	50	X	40	60
Personal Care	Surface finish and label adhesion quality expectations higher for retail-facing products	20	25	50-75		40	60
Household Cleaners	Chemical compatibility with PCR resin and cleaning formulations should be verified	20	25	50-75		25	50
Other	Performance specifications vary widely by application	15	25	50		20	40
PET Thermoforms						**Percentage of PCR in 2023 Annual Report: 19%**	
CA SB 54 category: PET (#1) - Other Rigid Containers, Cups, Lids, Plates, Trays, Tubs							
Food Contact	Thermoform-to-thermoform recycling loop is less developed than bottle stream. To incentivize the collection of PET thermoforms, it is recommended to incorporate thermoform-derived content instead of bottle-derived content whenever possible	10	20	30	X	30	50
CPET	PCR variability can affect crystallization rate and uniformity; opaque natural and dark pigmented cPET limits end-of-life recyclability of the format	10	20	30	X	30	50
Other	Clarity and mechanical performance specifications vary by application	10	10	30		20	40
HDPE Bottles/Jugs/Jars						**Percentage of PCR in 2023 Annual Report: 15%**	
CA SB 54 category: HDPE (#2) - Bottles, Jugs, and Jars (Clear/Natural) + (Pigmented/Color)							
Beverage	Demand for food-grade HDPE PCR may exceed available supply; multilayer extrusion blow molding may allow PCR as a middle non-contact layer, though FDA functional barrier status is not automatically granted; achievable PCR % varies widely depending on single- vs. multilayer construction, food-contact status, natural vs. colored resin, and handled vs. unhandled bottle design	10	25	50	X	40	60
Personal Care	Achievable PCR % varies widely depending on single- vs. multilayer construction, natural vs. colored resin, and handled vs. unhandled bottle design. Uncolored rHDPE is in limited supply, so it is recommended to incorporate colored rHDPE into bottles or containers that use colorant.	20	25	50-100	X	40	60
Household Cleaners	Achievable PCR % varies widely depending on single- vs. multilayer construction, natural vs. colored resin, and handled vs. unhandled bottle design	20	25	50-100	X	25	50
HDPE Other Rigid						**Percentage of PCR in 2023 Annual Report: 21%**	
CA SB 54 category: HDPE (#2) - Pails & Buckets + Other Rigid Items							
Closures		10	30	50		40	50
Food Contact Containers	Limited food-contact-grade supply relative to demand	10	15	30	X	20	30
Other		10	30	50		40	50
PE Tubes						**Percentage of PCR in 2023 Annual Report: 4%**	
CA SB 54 category: HDPE or LDPE (#4) - Bottles, Jugs, and Jars							
Food Contact	PCR supply limited by low collection and sortation rates for this format	10	30	50	X	15	30
Personal Care	PCR supply limited by low collection and sortation rates for this format	10	30	50		15	30
Other	PCR supply limited by low collection and sortation rates for this format	10	30	50		15	30
PP Bottle						**Percentage of PCR in 2023 Annual Report: 0%**	
CA SB 54 category: PP (#5) - Bottles, Jugs and Jars							
Beverage	PP food contact qualification timelines extended relative to other polymers; there are additional constraints for freezing, microwave, hot-fill, retort, and reuse applications; multilayer extrusion blow molding may allow PCR as a middle non-contact layer, though FDA functional barrier status is not automatically granted; converter validation required	10	25	30-50	X	40	60
Other Food Products	PP food contact qualification timelines extended relative to other polymers; NOLs are less common and converter re-qualification is complex; there are additional constraints for freezing, microwave, hot fill, retort, and reuse applications; multilayer extrusion blow molding may allow PCR as a middle non-contact layer, though FDA functional barrier status is not automatically granted; converter validation required	10	25	30-50	X	40	60
Personal Care	PCR variability may affect performance in thin-wall and high-clarity applications	10	25	30-50	X	25	50
PP Other Rigid						**Percentage of PCR in 2023 Annual Report: 2%**	
CA SB 54 category: PP (#5) - Other Rigid Containers, Cups, Lids, Plates, Trays, Tubs + Other Rigid Items							
Closures (Food Contact)	Converter re-qualification timelines extended for PP; small part geometry and dimensional tolerance; certification and re-testing requirements when changing PCR content; additional constraints for closures on hot fill, retort, or reuse packaging	5	25	25-50	X	40	50
Closures (Not Food Contact)	Small part geometry and dimensional tolerance; sorting and collection visibility; certification and re-testing requirements when changing PCR content; additional constraints for closures on hot fill or reuse packaging	10	30	50-100		50	60
Food Contact Containers (not subjected to heat or cooking)	This row covers ambient, non-heat applications only; containers subjected to heat, cooking, retort, or reuse present additional constraints not reflected here	5	15	30	X	40	50
Thermoforms	Converter re-qualification timelines are extended for PP; freezing, microwave, hot fill, retort and reuse applications impose additional constraints - confirm with converter	5	20	30-50	X	20	40
PE flexible (B2C)						**Percentage of PCR in 2023 Annual Report: 6%**	
CA SB 54 category: LDPE (#4) - Clear Non-Bag Film or Other Flexible and Film Items							
Food Contact Film	Palatability and organoleptic concerns with mechanically recycled content	5	10	30	X	15	25
Liquids & Barrier-Sensitive Applications	Risk of migration and extractables from PCR stream contamination	5	10	15	X	15	25
Overwrap / Secondary Bag (non-food-contact)	Visual clarity required to showcase primary packaging may limit PCR incorporation	5	20	40		15	25
Other Primary Packaging	Mechanically recycled PCR can bring visual defects that benefit from alternative marketing language	5	20	40		15	25
Checkout Carrier Bags	Thickness and lightweighting interactions affect PCR feasibility; risk of shallow circularity as PCR is largely sourced from and returned to the same carrier bag stream	20	40	75-100		50	60
Mailers	Print surface quality	25	50	75		60	70
B2B Packaging							
CA SB 54 category: EPS Transport Packaging						*Percentage of PCR in 2023 Annual Report: 2%*	
Coolers, Cushioning, etc.	Customer resistance to re-qualifying pre-existing components	30	35	50		20	30
CA SB 54 category: HDPE & PP rigid for B2B transportation						*Percentage of PCR in 2023 Annual Report: 2%*	
PP Transport Packaging	Customer- or retailer-driven procurement specs; mixed polymer grades in PCR stream; Certification and re-testing requirements when changing PCR content; Living hinge cracking risk; Long asset lifecycles complicate annual PCR reporting	5	25	75-100		40	60
HDPE Transport Packaging	Customer- or retailer-driven procurement specs; Certification and re-testing requirements when changing PCR content; creep behavior under sustained load may differ from virgin resin, relevant for long-dwell stacking applications; Long asset lifecycles complicate annual PCR reporting		100**			40	60
CA SB 54 category: PE / LDPE flexible (B2B): Pallet Wrap						*Percentage of PCR in 2023 Annual Report: 4%*	
Stretch Wrap (Machine)	Qualifications and re-testing requirements when changing PCR content/gauge	5	15	30		15	30
Stretch Wrap (Hand)	Cling consistency; worker ergonomics; Certification and re-testing requirements when changing PCR content	15	25	40		15	30
Shrink Wrap	Certification and re-testing requirements when changing PCR content; testing timelines can be significant	5	30	50		15	30
CA SB 54 category: PP Woven							
Feed bags, super sacks	Limited PP PCR supply; consistent melt flow required for woven tape construction; sortation and collection infrastructure limited for this format	5	15	30		15	30
Non-Packaging Opportunities						**Percentage of PCR in 2023 Annual Report: N/A**	
Trash Bags (LLDPE/LDPE)	Supply constrained by lower collection rates and complex sortation; Color less of a barrier; Achievable PCR % highly dependent on gauge	10	15	20-40 thin gauge; 75-100 thick gauge		20	30
Construction Film	Potential contamination from other construction materials limits PCR stream quality	20	30	50		40	50
Agricultural Film	Seasonal collection can lead to some supply instability	10	15	20		15	20
Protective Sleeves & Dust Covers	Achievable PCR % depends on clarity requirements of the specific application	20	30	50		30	50
Trash/Recycling Bins (HDPE)		25-30	50-75	100		60	75
Paint Cans		15	30	50		30	50
Storage Containers	Achievable PCR % depends on color requirements; darker colors more compatible with PCR variation	25	50	75-100		60	75
Boat Wrap	Collection infrastructure is geographically concentrated and program-dependent	10	15	20		15	20
Carpets & Rugs (PET)	Competes with packaging for bottle-derived rPET feedstock; durability and performance standards may constrain achievable PCR %	10	40	60-100		40	60

**Ranges dependent on gauge of bag*

***PCR incorporation in HDPE transport packaging tends to be binary (either 0% or 100% depending on application)*