Types of Material Used In Food Packaging

Material	Use	Appearance	Properties	Temperature Tolerance	Cost
Polypropylene	The most common takeout packaging material, used for chicken roasters, deli tubs, bakery and microwaveable takeout containers. Often used with an OPS dome, although some companies such as Anchor use PP for domes and lids. Used for some beverage containers. Excellent for ready-to-heat.	Usually made in black or clear. If clear, it's somewhat hazy. Can easily be made into many shapes, sizes and compartments and molded with design elements.	Very rigid, crack-resistant, leak- resistant. Can be film-sealed, if rim is wide enough. Can be coated with anti-fog material to retain clarity.	Preferred material for microwave and hot case. Can resist temperatures up to 220° to 240°. Bones, high-fat foods that retain extra heat will not burn through.	Moderately priced. Not as expensive as CPET.
OPS/HIPS	Versatile because one SKU can be used for sandwiches, salad, bakery, deli, produce and catering. Popular for platter domes; hinged lid for sandwiches.	Crystal clear, excellent for merchandising. Can also be black.	Stiff but brittle. Offers superior leak resistance and can be coated with anti-fog material to retain clarity when used in cold cases or for hot food. Can be made hinged or two-piece. Cut resistant. Too brittle for drinking cups. Not as strong as APET.	Best for cold case and room temperature applications. Can withstand temperatures up to 150°. Can hold hot foods, but should not be put in an oven, hot case or microwave (except as a dome).	Moderately priced.
Foamed Polystyrene	Clamshells and other hinged-lid containers, tableware, meat trays. Often used for restaurant doggie bags. Used for coffee and other hot beverages.	Can be white, black, vanilla, green, pink, yellow or blue.	Excellent heat retention and cold insulation. Strong, lightweight, won't allow soak-through. Snap- on domes work well on plates for table-ready presentation. Comes in a variety of grades.	Moderate temperature resistance. Can hold hot foods and is microwaveable. Certain hot foods, such as the bones of ribs and pork, can burn through.	Very economical. A good choice when merchandising is not needed.
СРЕТ	Frozen dinner trays and takeout entrée containers that need to be heated. Good for merchandising in the freezer, hot or cold cases.	Often black, but can be other colors.	A lot of design flexibility – can be ridged, indented, formed into multi-compartmented units. Good crack resistance when frozen.	Dual-ovenable with wide temperature range – can be heated in regular oven to 400 or frozen to minus-40.	Generally the most expensive of all the materials here.

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Material	Use	Appearance	Properties	Temperature Tolerance	Cost
Foamed Polypropylene	Good for clamshells and other hinged-lid containers, tableware, meat trays. This is a relatively new product and will become more used by various customers. Good barrier properties.	Usually white but can be other colors.	Excellent heat retention and cold insulation. Strong, lightweight, won't allow soak-through. Snap- on domes work well on plates for table-ready presentation. Comes in a variety of grades. Can also be heat-sealed with film.	Can hold hot foods and is microwaveable.	Moderately priced. We anticipate that it will fall between beaded chest foam pricing and polypropylene pricing.
PVC PETE	Especially good for merchandising cold foods, snack items and bakery items. Used for deli, produce, catering. Good clamshell for sandwiches. Used as domes for cakes, pies, party platters. Good for drinking cups. Excellent for frozen foods.	Extremely high clarity. PETE can be colored	Durable, tough, clear. Flexible Coke-bottle material. Creates durable hinges. Can also be made into two-piece containers. Will flex rather than crack under weight of food. Resists cracking in the freezer.	Moderate temperature resistance. Starts to melt before 140°. Cannot be used in oven, hot case or microwave.	PVC Economically priced. PETE Moderately priced
Molded Fiber	Plates, beverage carriers, fruit trays, French-fry boats.	May be off white to gray, depending on the amount of recycled newspaper content (plates that touch food directly must be made with virgin paper stock).	Superior strength and cut resistance. Can be made to absorb grease from fried foods and to repel oil and water to prevent soak-through. Can be filmed over with PET.	Can be microwaved. Not for use in the conventional oven.	Moderately inexpensive.
Pressed Paperboard	Frozen applications or fresh, film-sealed meals. Ideal for high-speed equipment processing in mass production. Used in supermarkets for ready-to-cook meals and other takeout.	Terrific printed graphic capability, good for branding or selling points. Van be made in a variety of colors and patterns.	Superior strength when made with a uni-body construction (no seams). Can be used with film seal or board lid. Not as tight a seal with plastic dome lid snapped on.	One of the widest temperature ranges available. Can be microwaved or placed in the oven up to 400° for one hour. Can be frozen to minus-40°.	Moderately priced.
Aluminum	Bulk items, such as steam-table pans, round carryout containers with board lid or clear dome, many bakery containers, party platters. Frozen entrees.	Silver, or may be coated in colors. New innovations have created smooth-wall containers for a more upscale look.	Retains heat and cold well, crack-resistant in the freezer. Highly leak-resistant. Offers a variety of lidding options – clear domes, laminated board, aluminum hood, film lid for specialty cases. Comes in a variety of gauges.	Extremely versatile – can go from freezer to oven to serving table. Can withstand very high heat. Microwaveable under certain conditions.	Inexpensive, except with specialty coatings.