Recommended Gas Mixtures for Food and Beverage Packaging

Food Items	Recommended Gas Mixture	Typical Types of Package:
Beef, Goat, Hare, Horse, Lamb, Rabbit, Veal, Pork	50% Carbon Dioxide 50% Nitrogen	Bag-in-box, Master pack and Cap Package
Capon Chicken, Duck Goose Grouse, Guinea Hen, Partridge, Pheasant, Pigeon, Poussin Cornish Hen, Qual and Turkey	100% Carbon Dioxide	Bag-in-box, Master pack
Bream, Brill, Catfish, Cod, Coley, Croaker, Dab, Dover, Lemon Sole, Flounder, Grouper, Haddock, Hake, Halibut, Hoki, Huss, Jackfish, John Dory, Mullet, Monkfish, Pike, Place Pollack, Red Snapper, Sea Bass, Shark, Skate, Turbot and Whiting	70% Carbon Dioxide 30% Nitrogen	Bag -in-box, Master pack
Bluefish, Carp, Eel, Greenland Halibut, Herring, Mackerel, Pilchard, Rock Salmon, Salmon, Sardines, Shad, Sprats, Swordfish, Trout, Tuna and Whitebait	60% Nitrogen 40% Carbon Dioxide	Tray, Lidding film, Three web pack
	70% Carbon Dioxide 30% Nitrogen	Bag -in-box, Master pack
Abalone, Clams, Cockles, Conch, Crab, Crayfish, Cuttlefish, Lobster, Mussels, Octopus, Oysters, Prawns, Scallops, Sea Urchins, Shrimp, Squid, Whelks and Winkles	70% Carbon Dioxide 30% Nitrogen	Bag-in-box, Master pack
Bacons, Beef burgers, Black Pudding, Charcuterie, Chopped Pork, Chopped Ham, Cooking Sausages, Corned Beef, Frankfurters, Haggis, Hams, Luncheon Meats, Meats Jerky, Meat Slices, Ox Tongue, Pastrami, Pates, Pepperoni, Potted Meats, Rillettes, Roast Meats, Salami, Smokeked Reindeer, Smoked Venison, Terrines and Wurst Sausages.	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
	50% Carbon Dioxide 50% Nitrogen	Bag-in-box, Master pack
Bloaters, Bambay Duck, Buckling Cod's Roe, Cold Smoked Fish, Fish Galantine, Fish Rillettes, Fish Terrines, Hot Smoked Fish, Kippers, Potted Fish, Potted Shellfish, Salted Fish Roes, Salted Jellyfish, Seafood Pates, Smoked Haddock, Smoked Halibut, Smoked Mackarel, Smoked Salmon, Smoked Trout and Taramasalata	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
	30% Nitrogen 70% Carbon Dioxide	Bag-in-box, Master pack
Capon Galantine, Chicken Ballotine, Chicken, Roll, Cured Game Birds, Cured Poultry, Duck Ballotine, Duck Pate, Duck Galantine, Pheasant Galantine, Pigeon Galantine, Smoked Chicken, Smoked Duck, Smoked Poussin, Smoked Turkey, Turkey Bacon, Turkey Ballotine, Turkey Galantine and Turkey Roll	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
	30% Nitrogen 70% Carbon Dioxide	Bag-in-box, Master pack



Food Items	Recommended Gas Mixture	Typical Types of Package:
Casseroles, Ready Meals containing Fish, Ready Meals containing Game Bird, Goulash, Ready meals containing Meat, Ready meals containing Offal, Ray meals containing Pasta, Ready Meals containing Poultry, Sauces, Ready Meals containing Seafood, Soups, Ready Meals containing Vegetables	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
	50% Carbon Dioxide 50% Nitrogen	Bag-in-box, Master pack
Battered Fish, Seafood, Meats and Poultry Bouchee, Breaded fish, Seafood, Meats, Poultry, Burritos, Enchiladas, Falafels, Filled Crepes, Pancakes, Rolls, Kebabs, Omelet's, Pasties, Pates en croutes, Pizzas, Pasta and pies containing Meat, Poultry, Fish and Seafood, Quiche, Roule au fromage, Sandwiches, Satays, Sausage Rolls, Souffles and Spring	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
	50% Carbon Dioxide 50% Nitrogen	Bag-in-box, Master pack
Capelli, Fettuccine, Funghini, Fusilli, Linguine, Macaroni, Pasta Shells, Spaghetti, Tagliarini,	50% Carbon Dioxide 50% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
Tagliatelle, Trenette, Tubetti, Vermicelli, Zitioni	50% Carbon Dioxide 50% Nitrogen	Bag-in-box, Master pack
Bagels, Bread Puddings, Breads, Buns, Cheesecakes, Crepes, Croissants, Crumpets,	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
Danish Pastries, Fruit Breads, Fruit Cakes, Fruit Pies, Fruit Strudels, Fruit Tarts, Meringue Cakes, Muffins, Nan Bread, Nut Breads, Pancakes, Par Baked Bread, Pita Bread, Pizza Bases, Pretzels and Sponge Layer Cakes, Swiss Rolls, Taco Shells, Tortillas, Vegetable Breads and Waffles	50% Carbon Dioxide 50% Nitrogen	Bag-in-box, Master pack
Hard Cheese ex. Mould-ripened cheeses: Butter, Cream Cakes, Creams, Custards, Fresh	100% Carbon Dioxide	Tray, Lidding film, Tray inside Pillow pack, Three web pack
Cheeses, Hard Cheeses, Margarine, Semi- Hard Chesses, Sliced Cheeses and Yoghurts	100% Carbon Dioxide	Bag-in-box
Aerosol Creams	100% Nitrous Oxide	Tubs and pots are commonly used for yogurts, soft cheeses, margarine, creams, custards and butter
Grated and Soft Cheeses ex. Mould-ripened cheeses: Butter, Cream Cakes, Creams, Custards, Fresh Cheeses, Hard Cheeses, Margarine, Semi-Hard Chesses, Sliced Cheeses and Yoghurts	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack, Three web pack
	30% Carbon Dioxide 70% Nitrogen	Bag-in-box
Aerosol Creams	100% Nitrous Oxide	Tubs and pots are commonly used for yogurts, soft cheeses, margarine, creams, custards and butter
Other Dairy Product	100% Nitrogen	
	100% Nitrogen	
Cocoa Powders, Coffees, Dehydrated Milk,	100% Nitrogen	Tray, Lidding film, and Pillow pack
Dried, Salted Fish, Dried, Salted Seafood, Dried Beans, Dried Cereals, Dried Cereals, Dried Colourings, Dried Flavorings, Dried Fruits, Dried Herbs, Dried Lentils, Dried Mushrooms, Dried Pasta, Dried Snack Food, Dried Spices, Dried Vegetables, Flours, Nuts Potato Crisps and Teas	100% Nitrogen	Bag-in-box

Food Items	Recommended Gas Mixture	Typical Types of Package:
Bean Chilies, Bhajis, Broccoli in Cheese, Bubble and squeak, Cauliflower Cheese,	30% Carbon Dioxide 70% Nitrogen	Tray, Lidding film, Tray inside Pillow pack
Cole slaw, Cooked Beans, Potato, Corn Fritters, Garlic Mushrooms, Lentil Cutlets, Dressed Salads, Pakoras, Pasta salad, Pilafs, Quorn Dishes, Rice Salads, Rissoles, Stuffed Peppers, Stuffed tomatoes, Vegetable Bakes, Casseroles containing Vegetables, Vegetable Pastas and Crumbles, vegetable curries and Dosas, Vegetable Flans, Vegetable Pilau, Vegetable Pie and Vegetarian Burgers	50% Carbon Dioxide 50% Nitrogen	Bag-in-box

Beverage	Recommended Gas Mixture	Typical Types of Package:
Liquid Beverage: Beers, Ciders, Carbonated Soft Drinks, Cordials, Fruit Juices, Lagers, Liqueurs, Liquid Yoghurt, Milk, Mineral Waters, Oils, Spirits, Vegetable Juices, Wine	100% Nitrogen	Cartonboard gable-top containers, Glass and plastic bottles, Aluminum and steel cans
	100% Nitrogen	Kegs, Stainless Steel tanks and Barrels
Carbonated Drinks: Beers, Ciders, Carbonated Soft Drinks, Cordials, Fruit Juices, Lagers, Liqueurs, Liquid Yoghurt, Milk, Mineral Waters, Oils, Spirits, Vegetable Juices, Wine	100% Nitrogen	Cartonboard gable-top containers, Glass and plastic bottles, Aluminum and steel cans
	100% Nitrogen	Kegs, Stainless Steel tanks and Barrels

Copyright 2021 Matheson Tri-Gas, Inc. All Rights Reserved.

All contents of this document are subject to change without notice and do not represent a commitment on the part of Matheson Tri-Gas, Inc. Every effort is made to ensure the accuracy of this information. However, due to differences in actual and ongoing operational processes and product improvements and revisions, Matheson Tri-Gas, Inc. cannot guarantee the accuracy of this material, nor can it accept responsibility for errors or omissions. This document is intended to serve as a general orientation and cannot be relied upon for a specific operation. No warranties of any nature are extended by the information contained in these copyrighted materials.

All names, products, and services mentioned herein are the trademarks or registered trademarks of their respective organizations and are the sole property of their respective owners. Matheson and the Matheson logo are registered trademarks of Matheson Tri-Gas, Inc.

Specifications are subject to change. Please check **www.mathesongas.com** for most current information.



TB416 09/2021 Printed in USA