Ready Meal Packaging

Packaging for ready meals needs to be food safe, robust enough to withhold knocks during transit, be strong enough to hold liquid based foods and potentially be able to withstand vast temperature ranges from freezing up hot serving temperatures. If you are selling your products in a shop, it needs to be appropriate for display purposes, be tamper proof and also be able to maintain freshness. Following are some of the considerations when deciding on what packaging to use for a retailable ready meal.

Recyclable, Returnable, Compostable?

Environmental considerations are high on consumer agendas now so...

- Is your packaging recyclable in your local area e.g. with kerbside collections?
- Could you offer returnable packaging for re-use - how could this work, is your customer base local enough to return packaging? Would your customers be engaged in this? Would be you able to clean and sterilise packaging effectively with appropriate arrangements in place to do this? Would this be affordable if packaging is not returned?
- Could you offer packaging that could have a secondary use in the home?
- Could your packaging be compostable to break down naturally, or with commercial food waste composting?

Heating methods and packaging

Your packaging also needs to be suitable for whatever heating methods you are using. With microwaves being the most energy effective option for heating ready meals, you may want to trial packaging that withstands microwave heat as well as cooker heat. Suppliers and manufacturers should be able to supply a specification and migration certificate for packaging stating it is safe to use with food and what heat tolerances it can withstand.

Trial packaging

Take time to request samples from suppliers and trial them with your own equipment to see how they withstand freezing, re-heating and moisture retention. For example, some plastics are fine for chilled use, but can become brittle in frozen storage. Remember to keep notes as to which performs best! A lot of packaging is manufactured outside of the UK so check that supplies are plentiful and readily available.

Lids and sealing

If you are creating a meal to be eaten at a later time your packaging will need an airtight lid to maintain freshness and hygienic conditions. Packaging and lid also need to be able to show that they are tamper proof.

Hand packaged or machine

Traditionally ready meals have a heat sealed film lid. This are done with special machines which retail from about £500. These provide an airtight hygienic sealed lid, are suitable for use in a microwave but may only be recommended if you are making high volumes of meals due the investment required.

Outer sleeves

Your outer sleeve, box or label of your ready meal are your key marketing tool and also a consumer's main source of information about the product. There is information that legally needs to be included on your packaging as well as ingredients, nutritional information and your promotional wording and company story. So consider the size needed for all the information you need to include. Design and print of packaging can take considerable time and investment so give yourself time to fully assess costs, design choices and regulatory information to ensure you get it right first time.

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Cost-effectiveness

A leading aspect of your decision-making for choosing packaging may be cost. Whatever option you go for, make sure that the packaging costs are embedded in your financial planning and final unit costings so you can be resilient to fluctuations in pricing and so that you do not have to change packaging once you have it in place. Whilst stylish and expensive packaging solutions and quality printed sleeves and labels may enhance consumer preference and selection of products, it will need to be covered within the product costing.

Fresh or frozen?

If you are intending on selling your product fresh, this could also have an impact on the packaging you choose. If using a cardboard carton, this may quickly become flimsy from liquid seeping through, but the packaging may retain its strength if you quickly freeze your meal once cooled, and then instruct to cook from frozen. There is often a perception that frozen products are inferior to chilled, this is often not the case, notably with fish and meat-based products. From a production viewpoint, there are huge benefits in producing frozen products in batches and these can be stored and distributed far more easily than chilled products and with far less wastage. Whether your ready meal is fresh or frozen may also impact on the format for date coding as chilled products will be 'use by' and frozen will be 'best before' or 'best before end' codes. Selling a frozen product will also give an extended shelf life and more time for a retailer to sell your product so may be preferable to fresh.

Chemical contamination

There is also a need for the packaging not to pose a risk for chemical contamination of food as being suitable for purpose and meeting the requirements for migration of chemicals to products (given the temperature extremes) which will be confirmed through supplier specification and migration certificates.

Product shelf life

Determining a best before or use by date an be tricky and may take some testing. The rigour for chilled products will be significantly greater than for frozen products. If a product is hygienically prepared and frozen quickly using a fast-freeze method, then the product is unlikely to be unduly affected by microbiological deterioration during the frozen storage. There are quality changes, such as build-up of ice crystals and oxidative rancidity that can affect products and will need to be considered. For validation of frozen products, microbiological end of life testing can be at a minimal level with samples retained at and beyond the defined shelf life to validate date selection.

For chilled products, don't assume your ready meal can have the same dates as a ready meal sold in a supermarket as mass produced ready meals often have 'Modified Atmospheric Packaging' (MAP) where the oxygen is removed from inside the packaging and replaced with a mix of gases at the time that the lids or film lids are sealed to improve the appearance of the product and extend the shelf life. Similarly, vacuum-packing is a well proven method to obtain longer shelf life, but both MAP and vacuum packing will need to employ robust checks to confirm gas composition/effective sealing of packs. MAP is not really considered an option for small-scale production (although the technology is becoming more affordable), but important to note when determining a best before date.

Links and further information

https://www.food.gov.uk/safety-hygiene/best-before-and-use-by-dates
https://www.modifiedatmospherepackaging.com/
https://www.storaenso.com/en/inspiration-centre/renewable-future-blog/2021/7/the-alternative-to-ready-meal-plastic-packaging

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