

New study: metal packaging is microwave-friendly

Researchers give green light for the use of metal containers in microwaves

Brussels, October 3rd. Under normal conditions of use, shallow and wide open steel and aluminium containers are safe to be used in microwave ovens. This is the outcome of an independent study of the Fraunhofer Institute, released today. Researchers also found that food in metal containers is more uniformly heated than in plastic containers. The findings open up a wealth of opportunities for consumers and brand owners alike.

Aimed at looking into the safety and performance of microwave heating food in rigid steel and aluminium containers, the survey was conducted by the renowned Fraunhofer Institute for Process Engineering and Packaging on behalf of the **Metal In Microwave Industry Group** composed of Alcan Rhenalu, the Association of European Producers of Steel for Packaging (APEAL), Crown Food Europe, Fördergesellschaft Metallverpackungen (FGM), Impress and Novelis.

The researchers used various recipes packed in five metal containers of different dimensions and shapes and tested them with four popular household microwave oven models.

Safe for use

During about 1000 microwave heating experiments with normal handling of metal containers, not a single incidence of a spark or a potentially risky situation was observed. In addition, no functional oven damage or unusual degradation of oven power was found after this large number of heating experiments with metal containers.

“We therefore conclude that the use of shallow and wide open metal containers for heating of food in microwave ovens is perfectly viable from a safety point of view, as long as some basic rules of microwave oven operation are respected” says Thomas Pfeiffer, a Fraunhofer researcher.

A few basic guidelines, such as fully removing the lid of the container, placing only one filled container at a time in the centre of the glass turntable and leaving a gap between metal container and oven wall, are specified in the Fraunhofer report.



on behalf of: **Metal In Microwave Industry Group**

More uniform heat

Although microwave heating times for food in steel and aluminium containers were longer than in similar plastic containers, there was generally less temperature variation and therefore better heating uniformity in the tested metal containers.

The study recommends the use of shallow metal containers with a wide open surface area to reduce the heating time.

New market potential

The microwaveability of shallow metal containers opens up a wealth of new opportunities for brand owners and consumers alike.

For the consumer, it offers the added convenience of dual ovenability with both microwave and traditional ovens. For brand owners it provides new opportunities to segment their product range further by developing suitable food products such as ready meals and soups for microwaveable metal packaging.

For further information, on behalf of the Metal In Microwave Industry Group:

APEAL

Charles Reuland

Communications Manager

Tel: +32 2 537 91 51

c.reuland@apeal.be

www.apeal.org