

The safe and sustainable alternative

Stainless steel reusable and microwave safe food containers



Stainless steel containers in the microwave

Stainless steel containers are available in many different forms and shapes. Stainless steel food containers provide the premier choice for many users because stainless steel, unlike alternative materials, does not influence the flavour of the food, is completely hygienic and safe to use. You can use stainless steel containers time and time again and at the end of their long life, the containers can be recycled without the loss of quality or material integrity.



Traditionally, metal food containers have been prohibited from being used in microwave ovens due to electrical arcing inside the ovens. Today it is easy to find microwave-safe stainless steel food containers in a variety of selling outlets, including popular online selling platforms. You can find stainless steel containers in various capacities ranging from 300ml to 1100ml with the most popular products offering around 900ml of capacity.

Most stainless steel food containers are made of 304 grade (18/8 stainless), and **new microwave-safe containers have had their corners specially designed so they do not cause problems when used in a microwave oven.** These

products have been used safely since 2020. Microwave-safe stainless steel food containers are now being sold in Asia, the United States, and Europe. If you've been hesitant about using stainless steel containers for reheating cold food, don't worry!

You can now safely use the new stainless steel containers for reheating your lunch or takeaway foods instead of single use food containers made from less resilient materials. However, please note that not all stainless steel containers in existence can be used in a microwave ovens, so be sure to check the manufacturer's instructions before use.



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Stainless steel

A corrosion-resistant material

The secret behind stainless steel is an invisible “passive layer”. It develops naturally on the surface from the iron and the chromium contained in all stainless steels. If damaged, this microscopic layer will instantaneously reform. It makes stainless steel a “self-repairing” material, which dispenses with any external surface protection: the material remains corrosion resistant as it is. [Read more here](#)

It is this general inertness that makes them ideal for food contact. After all, if there is no measurable chemical reaction between the stainless steel and the food, not only will the material remain pristine, but so will the food, untainted by metallic constituents or corrosion products.

A hygienic material

Stainless steel is exceptionally wear resistant. It has hard smooth surfaces, which are easy to clean, making it difficult for germs to adhere and grow. [Read more here](#)

A safe material

The continuing safety of using stainless steel in food preparation has been confirmed in an independent study following the adoption of new test criteria across Europe. The Council of Europe’s (CoE) guidelines for metals and alloys in food contact materials defines specific release limits (SRLs) for metals and includes a new, more aggressive test to simulate use in food preparation. The authors demonstrated that all of the grades passed the test for the relevant metallic elements prescribed in the CoE guidelines. [Read more here](#)

A recyclable material

On average 95% of stainless steels are recycled once they reach their end of life. Globally the average recycled content of stainless steel was 48% (37% stainless steel scrap and 11% carbon steel scrap).

Stainless steel applications have a very long life. In fact, most of the stainless steel produced in the past 20 years is still in use today. These applications represent an urban mine of stainless that will, in the future, be recycled to create new stainless steel.

There is not yet enough stainless steel scrap available to make all new stainless from recycled resources. As the urban mine of stainless steel becomes available, the percentage of recycled scrap in each tonne should increase and reduce emissions further. [Read more here.](#)

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About worldstainless

worldstainless is a not-for-profit research and development association which was founded in 1996 as the International Stainless Steel Forum.

Its primary roles are to undertake stainless steel industry beneficial tasks that are better coordinated centrally in the fields of

- Promoting industry and material sustainability benefits
- Conserving resources and promoting the circular economy
- Providing economic and industry-leading statistics
- Support industry health & safety needs and developments
- Outlining market development and expansion opportunities
- Maintaining brand reputational positioning
- Materials education

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