

## Avery Dennison Microwave Resistant inlays Capturing the benefits of RFID

Sodexo is capturing the benefits of RFID while making the consumer experience easy and convenient by using Avery Dennison Microwave Resistant tags to reduce the spark hazards from RFID-labeled microwavable meals.





This system is not only convenient to the users;  
It also helps clients lower labor costs, reduce food  
waste, and better manage their inventory.



### **SmartChef Powered by SmartFridge**

Based in Paris, Sodexo is one of the largest multinational corporations providing food services and facilities management services. In October 2018, Sodexo piloted SmartChef, a grab-to-go food concept powered by SmartFridge, to provide convenient, all-day food access. Invented by CryoWerx, a Singapore-based engineering and technology company, SmartFridge is a fully-automated self-service vending machine that provides ready-to-eat options including hot entrees, healthy snacks, and beverages. It is also RFID-enabled, providing a cashless experience.

Each item in a SmartFridge is tagged with an RFID inlay. Through the SmartChef app, consumers simply scan the machine's unique QR code to unlock the fridge and take what they want. As soon as the door closes, SmartFridge reads the remaining items to identify the consumer's selections, which are then automatically billed to their preferred payment mode. This system is not only convenient to the users; It also helps clients lower labor costs, reduce food waste, and better manage their inventory. Precise tracking and tracing enable operators to efficiently replenish and manage the machines, while promotions can be digitally displayed on the face of the fridge to offer discounts on items near expiration.

## The Challenge

As microwaving standard aluminum components could potentially cause sparking or even create a noticeable flame, consumers are instructed to remove the RFID tags from the food items before microwaving them – a requirement that is critical to consumer safety, but at the same time something that can easily be overlooked. The team had run into a challenge: How could it benefit from a combined technology of RFID and SmartFridge while ensuring consumer safety?

## The Solution

AD-251r6-P inlays are the first microwave resistant UHF RFID solution developed by Avery Dennison in 2017 and introduced to the market in 2019, for item-level tagging of frozen packaged foods while ensuring food safety compliance. AD-251r6-P inlays are designed to prevent arcing or heat build-up during microwaving while still delivering highly accurate read rates for item tracking.

“Safety is such a big issue and we take consumer health to heart,” says Darwin Gosal, CEO at CryoWerx. “A few months after conceptualizing SmartChef, we were introduced to AD-251r6-P inlays which were a great fit for our needs. Our sole focus now is expanding and accelerating the use of SmartFridge globally, which is extremely exciting.”



“

A few months after conceptualizing SmartChef, we were introduced to AD-251r6-P inlays which were a great fit for our needs. ”

Darwin Gosal, CEO at CryoWerx.





### **Microwave Resistance is key**

Initially launched at Sodexo Asia Pacific House, SmartFridge has proven to be a success. With Avery Dennison's AD-251r6-P inlays, Sodexo's operations are now streamlined.

Using AD-251r6-P inlays has helped Sodexo to keep SmartFridge users safer by reducing the spark hazards associated with RFID tags on microwavable packages. The company has also been able to simplify their operations, since there is no longer a need to provide warnings about the possible fire risk on food packaging or the pantry's microwave.