

# Aseptic packaging – how it works



Aseptic carton packaging allows distribution in ambient conditions, meaning it can be safely stored at room temperature without the occurrence of microbial growth. To achieve this, both the product and packaging materials must be free of harmful bacteria while being packaged – everything in the production chain must be commercially sterile.

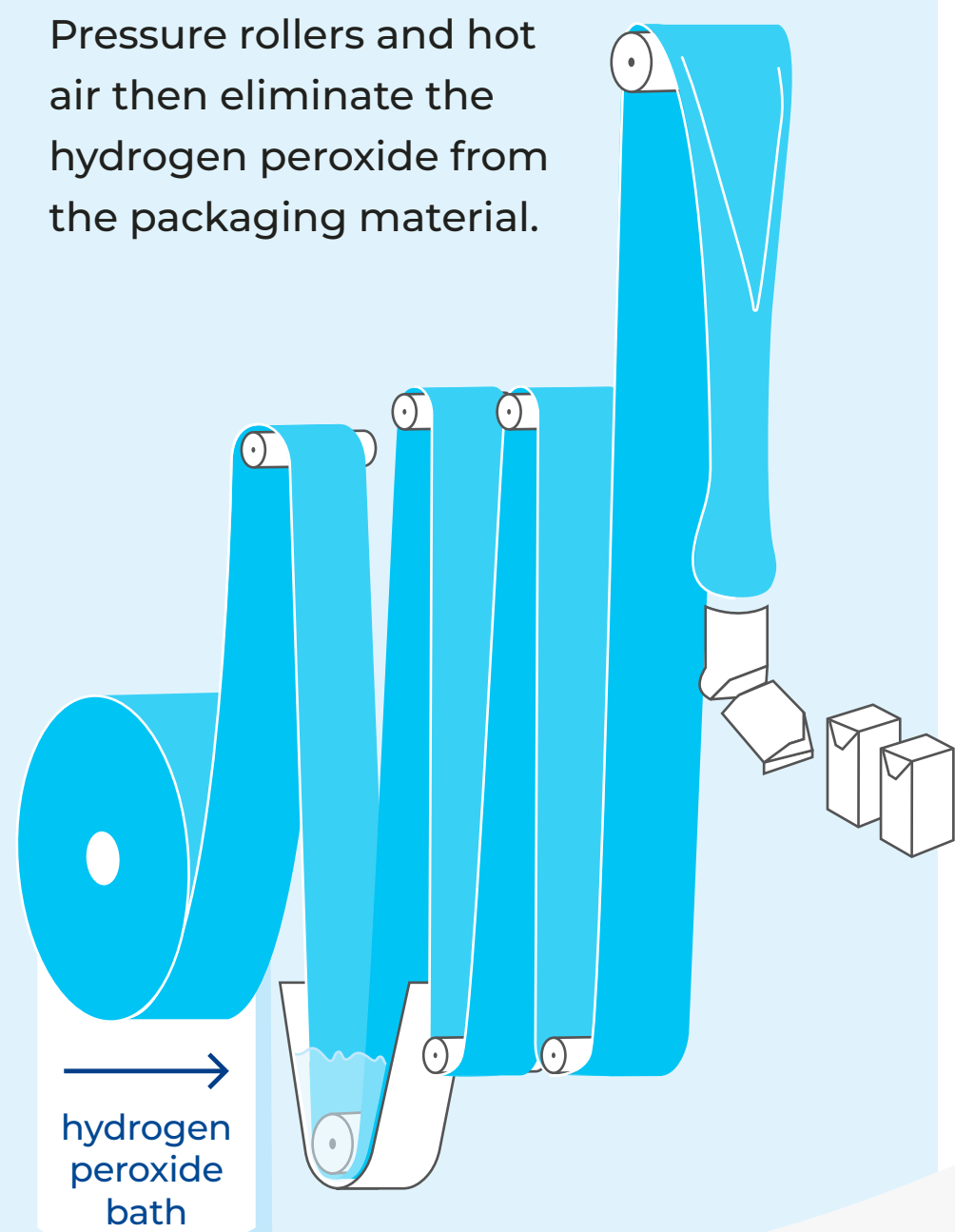
## How is packaging material sterilised prior to filling?

There are two main methods of sterilisation:

### Hydrogen peroxide bath

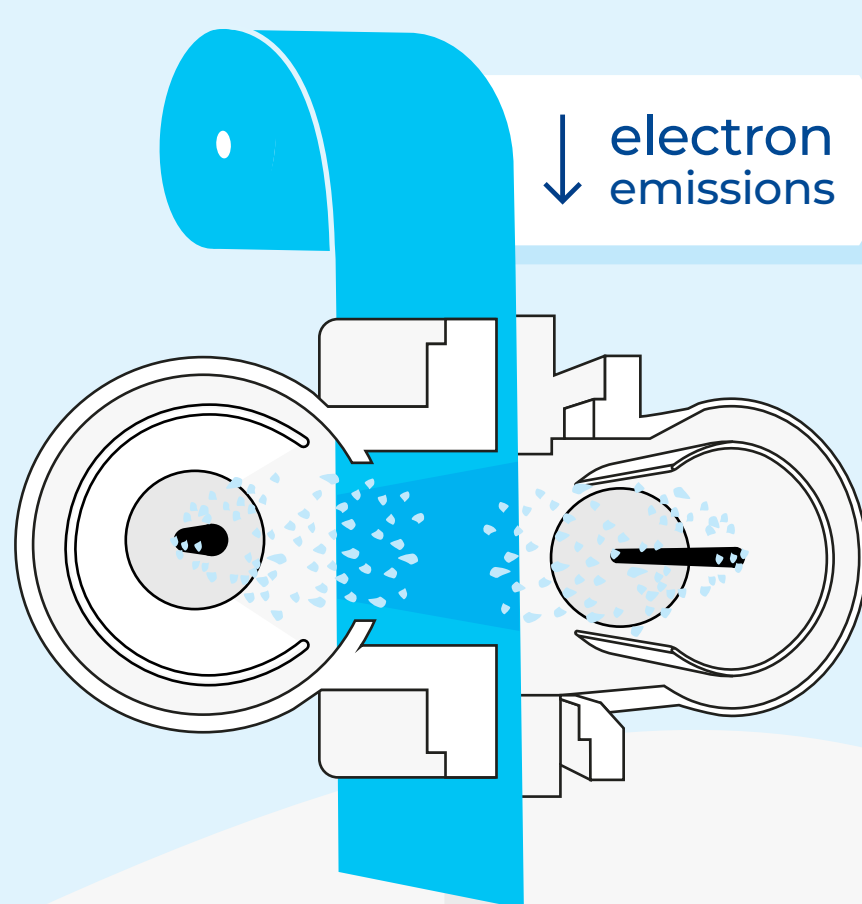
One way is for the packaging material to be sterilised both inside and out in a peroxide bath. This involves passing flat, unformed packaging material through a hydrogen peroxide bath. Here, a concentration of hydrogen peroxide is heated.

Pressure rollers and hot air then eliminate the hydrogen peroxide from the packaging material.



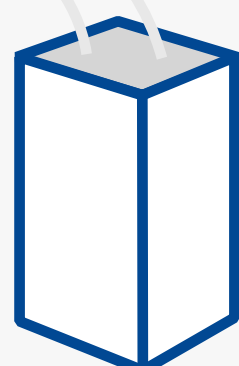
### eBeam

A second option is using eBeam technology to sterilise the inner and outer parts of the packaging material throughout the production process. Electron emissions guarantee an equivalent sterilisation performance to that of hydrogen peroxide systems, and is the latest innovation on our Tetra Pak® E3 filling machine platform fillers.



### Filling and sealing

To prevent contamination, filling and sealing machinery must also be sterile before and during the packaging process.



This can be achieved using hot air and steam, or by combining heat treatment with chemical sterilization.

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