Cryogenic Applications and Sterilization

In light of ongoing advances in assisted reproduction, transfusion medicine, organ transplants and stem cell technology, more than one million human tissue samples are collected every year. Every one of them requires treatment, storage and transportation at cryogenic temperatures, together with accurate labeling. For all biological and pharmaceutical needs products that are subjected to cryogenic and ultra-low temperatures, Avery Dennison has developed a range of labels that promise excellent adhesion and durability across the whole value chain.

The durability of materials is of utmost importance for biological and pharmaceutical products such as blood, stem cells and whole tissues that are preserved by cooling to low sub-zero temperatures, such as -196°C (the boiling point of liquid nitrogen). At temperatures below -130ºC, biological activity ceases and therefore storage at these temperatures is necessary to preserve the material in its unaltered state. It is imperative that not only these products, but the labels that identify them for potentially life-saving and life-creating medical applications, do not deteriorate.

Avery Dennison materials for cryogenic applications were designed for applications ranging from room temperature to storage in liquid nitrogen and harsh deep-freeze environments. They can be applied on containers, tubes, vials, aluminum canisters and other challenging surfaces.

Avery Dennison's range of labels for cryogenic applications helps ensure clear identification of biological materials from collection to storage, transportation and delivery to the medical facility and, ultimately, the patient.

Key features

- Good adhesion to substrates including polypropylene, glass, PVC and steel
- Compatibility with a variety of different printing methods such as UV flexo, thermal transfer and UV inkjet
- Availability in facestocks including clear and white films for different applications and temperatures
- Excellent conformability and malleability
- Ability to withstand the multiple freeze-thaw cycles

Application areas

Bio-Banking

- Blood products
- Serum
- Reproductive tissue storage
- Stem cells
- Cell and tissue freezing
- Tissue culture
- DNA and RNA
- Cord blood and stem cells

Pharmaceutical

- Vaccines
- Drugs
- Injectables

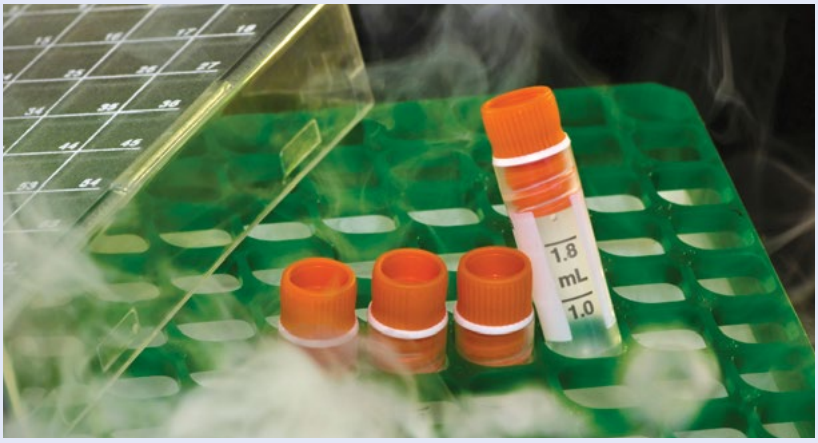
Product information

Code	Product description	Service Temperature	Application Temperature	Autoclave Sterilization	TT Printability	UV Inkjet	Certificates*	Food Approvals
BB624	PP Light Top Clear-S2196-BG40WH	-196 / 120 °C	10 °C	✔	✔	✔	✔	✔
AZ452	PP Top White-S2196-BG40WH	-196 / 120 °C	10 °C	✖	✔	✔	✔	✔
AH403	2.3 Mil White Polypropylene TC/C0196/40#BG	-196 / 120 °C	-28°C	✔	✔	✖	✖	✖
BG470	PP95 Matt White S2196-BG40WH	-196 / 120 °C	10 °C	✔	✔	✖	✔	✔
BH419	PET50 Pt White S2196-BG40WH	-196 / 120 °C	10 °C	✔	✔	✖	✔	✔
BP341	@PPIMAX Plus C2050P-BG45WH	-196 / 120 °C	-50°C	✔	✔	✖	Pending	Pending

*ISEGA, FDA, ISO3826

Available in Asia, Europe and the Americas, Avery Dennison serves you better with a wide range of labels specially developed for cryogenic applications and sterilization within the pharmaceutical and bio-banking industries.

Choose Avery Dennison and safeguard the health of your business, and your customers' patients, with the help of our dedicated and responsive local sales and technical support teams.



For more information on technical performance and printing recommendations, please refer to the respective datasheets. Please note that the Avery Dennison product range and service offering can be subject to changes. For an accurate overview, please check our website **label.averydennison.eu** or contact your local Avery Dennison sales representative.

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