



Ensure High Performance at Ultra-low Temperatures

Avery Dennison Labels for Cryogenic Applications and Sterilization

The durability of labeling materials in cold temperatures is of utmost importance for biological and pharmaceutical products such as vaccines, biologic drugs, blood, stem cells, and whole tissues that are preserved by cooling to low sub-zero temperatures, as low as -196°C (the boiling point of liquid nitrogen). At temperatures below -130°C , biological activity ceases and therefore storage at these temperatures is necessary to preserve the product in a stable environment. 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 to plastic and glass containers, tubes, and vials, as well as aluminum canisters and other challenging surfaces.



The Avery Dennison selection of labels for cryogenic applications helps ensure clear identification of biological materials at every step to ultimately reach 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 and thermal transfer
- > Clear and white film facestocks available
- > Excellent conformability for tight mandrel situations
- > Ability to withstand multiple freeze-thaw cycles

Key Benefits

- > Clear identification of biological drugs, bio-banking products and blood components
- > Reduced risk of potentially catastrophic mixups due to label displacement during transportation
- > Unobstructed view of products in transparent packaging (with clear film)
- > Ultimate product protection throughout the supply chain, from manufacturer to retailer, medical facility and patient

Applications

- > **Pharmaceutical**
 - » Vaccines
 - » Drugs
 - » Injectables
- > **Bio-Banking**
 - » Blood products
 - » Serum
 - » Reproductive tissue storage
 - » Stem cells
 - » Cell and tissue freezing
 - » Tissue culture
 - » DNA and RNA
 - » Cord blood and stem cells



Product Description	Spec#	Service Temperature	Application Temperature	Autoclave Sterilization	TT Printability	Width/Length (In./Ft.)	Location	Lead Time
2.3 Mil White Polypropylene TC/C0196/40#BG	77392	-320° F	-20°F	Yes	Yes	59/1668	NEE	1 Day
1.5 Mil Clear PRT PET/S730A/ 1.5 Mil PET	73122	> -40°C (-40°F)	-20°F	Yes	Yes	54/4630	PVL	5 Days

NEE= Neenah, WI PVL=Painesville, OH

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