



Flexcon® PharmCal® CryoFlex™ 070806

Engineered Material for Extreme Storage Conditions - Liquid Nitrogen
FLX070806 | Part #: PPX-BD79-84GYS/17

Benefits

- Topcoat allows for smudge proof and abrasion resistant thermal transfer printing
- Engineered product can withstand temperatures as low as -320.8 o F (-196 o C), making it suitable for use in liquid nitrogen at its boiling point
- Adhesive is engineered to survive extreme temperature cycling including exposure to liquid nitrogen
- Helps to support sustainability efforts and provides the same performance level as a standard polyester liner
- Overall thinner product construction yields more labels per same diameter roll yielding less changeover

Features

- Topcoated 1.0 mil clear matte polypropylene
- Printable via resin & wax/resin thermal transfer; UV & solvent screen; UV, solvent & water flexo; laser (toner); and narrow-format UV inkjet
- Permanent high-tack cold temperature adhesive design for application to glass and plastic tubes and vials
- 1.2 mil polyester release liner manufactured from up to 30% PCW content
- Release liner provides a good diecutting base and allows for high-speed dispensing

Additional Details

- Product complies with 21 CFR 175.105, REACH, and RoHS/WEE
- 6-month change notification
- Compatible sterilization methods
- Gamma Sterilization (maximum dose~20kGy)
- ETO Sterilization (maximum concentration~400 mg/L)
- Dry heat (recommended 70 o F for label itself)
- Autoclave (recommended only after applying the labels to vials)

Note: For optimum performance in cryogenic environments, die cut the labels so that the longer dimension is parallel with the machine direction (MD) of the material.

Technical Data

Physical Properties

| Thickness (Mils [microns]) | Mils | Microns |
|----------------------------|------------------|--------------|
| Total Product | 3.25 | |
| Film | 1, +/- 10% | 25, +/- 10% |
| Adhesive | 0.6-0.7, +/- 0.1 | 15-18, +/- 3 |
| Liner | 1.2, +/- 10% | 30, +/- 10% |

Test Method:

Adhesion Properties

| Ultimate Peel from | Average Oz/In | (N/m) |
|--------------------|---------------|-------|
| Stainless Steel | 65 | 715 |
| Acrylic | 97 | 1067 |
| Glass | 45 | 495 |
| Polypropylene | 21 | 231 |
| Polyethylene | 16 | 176 |

Test Method: ASTM D 903 Modified

| Additional Properties | Value | Test Method |
|---------------------------------|---|----------------------|
| Expected Shear (hours) | <0.5 | ASTM D 3654 Method A |
| Tack (g) | 690 | ASTM D 2979 |
| Expected Exterior Life | Indoor use only | |
| Additional Information | | |
| Service Temperature | -320.8°F to 275°F (-196°C to 135°C) on plastic tubes, PP vials, EVA bags, and paper boxes | |
| Minimum Application Temperature | -320.8°F (-196°C) | |
| Storage Stability | Two years when stored at 70°F (21°C) and 50% relative humidity | |

Product Performance and Suitability

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