



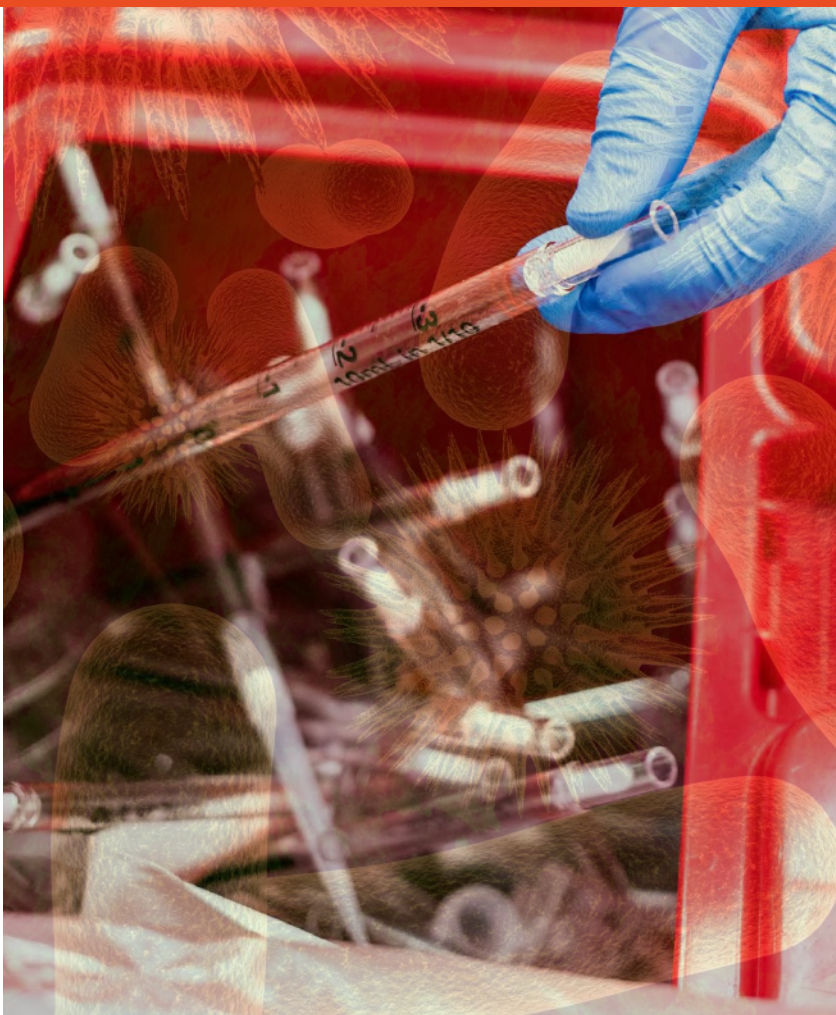
Regulated Medical Waste containers have a very specific job description. To contain and seal biohazardous waste for storage or transport since it has immense potential to cause harm or disease.

The vast majority of medical waste containers are made of high density polyethylene plastic (HDPE). This plastic is chosen specifically for its superior performance including

Polymer Fusion Technology

Antimicrobial Solutions

*Antimicrobial Labeling for use
on LSE Polyolefin Thermoplastics*



High Density Polyethylene sharps container.

including puncture resistance, chemical resistance during sanitization procedures and long service life as a reusable.

However, the performance properties that make HDPE such a versatile material for reusable medical waste containers also makes it problematic for common “adhesion-based” warning labeling methods available today (*e.g. pressure-sensitive adhesive, in-mold, hot stamp foil, heat transfer, silk screen, pad printing and more*) that are intended to be on the product for life use.

Industries Utilizing Medical Waste Containers

- > **Hospitals, Healthcare Facilities, and Surgery Centers**
- > **Laboratories and Blood Banks**
- > **Doctor's Offices and Veterinary Clinics**
- > **Dental Offices**
- > **Long-Term Care and Hospice Industry**
- > **Funeral Homes**
- > **Pharmacies and Pharmaceutical Industry**

“Real World” results prove that common labeling methods are continuously failing their informative duty on HDPE medical waste containers. This comes as no surprise as containers and labeling are consistently being subjected to extremely harsh environments (sanitation cycles, extreme temperatures, chemicals, moisture and more) numerous times annually throughout their lifespan that renders “adhesion-based” methods inoperative.



Failing adhesion-based biohazard label applied to HDPE.

Apart from crucial biohazard safety information going missing or being un-readable, damaged labels pose an additional threat. Exposed layers and sticky adhesives are proven sites where bloodborne pathogens and other microbes harbor safely away from exposure to disinfectants and sanitation cycles. Not only are users left not knowing what might be inside or what dangers they could potentially be exposed to, they're actually being exposed.

There is a better alternative!

Polymer Fusion Technology

- the science of merging two separate polyolefin thermoplastic polymers together (polyolefin label + polyolefin product) utilizing melt point, time and pressure producing a singular piece of plastic without the use of adhesives, tie layers, bonding agents or secondary surface treatments.

Polymer Fusion Technology was specifically engineered for perfect compatibility with polyolefin thermoplastics (including HDPE) to deliver unrivaled lifelong performance.



(TOP - Fusion Label, BOTTOM - Polyolefin Product, MIDDLE - "Fusion Reaction")
Simulation of Polymer Fusion Label fusing to Polyolefin Thermoplastic Product

Polymer Fusion Technology with BioCote®

BioCote® (silver ion) antimicrobial additives are introduced into the polymer matrix of our Fusion Technology inks during production and printed as part of a logo, warning label or informative graphic that is then applied onto customers products. According to BioCote®, *"the technology has been proven to be efficacious against a wide range of microbes – bacteria, mould and viruses while being resistant to exposure to commonly used cleaning disinfectants for the life of the product."*



Polymer Fusion Technology printed and fused to HDPE Biohazard Tote.

During application, the Polymer Fusion Label with BioCote® and HDPE product simultaneously reach melt point causing a "fusion reaction." The result - a permanent warning or informative label on plastic that cannot be lifted, separated or removed for the life of the product no matter the environment or exposure. It also means no more exposed layers or sticky adhesives where microbes hide leaving users susceptible to contact.

Polyfuzer's industry-leading **Lifetime Guarantee** means peace of mind knowing Polymer Fusion Technology has your back for the life of the medical waste bin.

***Polymer Fusion Labeling is fully recyclable with polyolefin thermoplastic products at end of life use.**