

# EXPLORE **RECYCLABLE** MEDICAL PACKAGING SOLUTIONS

## Looking to develop sustainable & recyclable medical packaging?

Switching from PS, PVC, PET or PETG to XPP Medical Polypropylene can help reduce the carbon footprint of your packaging. But regardless of sustainability goals, patient safety must remain priority - meaning that sustainable packaging solutions must maintain safety, regulatory and performance expectations.

You need to select the right material solution: one that is **sustainable, safe, and provides the same package performance** as your current material - and comes at a **reasonable cost**. Impact's **XPP Medical polypropylene** is the ideal material for a recyclable & cost-effective solution

Not only does it serve as a drop-in replacement in thermoforming & FFS, but it is also one of the most cost-effective, sustainable & recyclable solutions available on the market today. See how XPP-M can help you achieve your sustainability goals at a cost savings.



## Lower Cost & Reduced Consumption

The low density & lightweight nature of XPP-M offers increased resource efficiency for thermoformed and FFS medical packaging versus alternative PS, PVC, PET & PETG materials (while also meeting technical & safety requirements). Because of this increased efficiency, medical OEMs can purchase XPP-M at a lower total cost than other materials, while reducing material consumption as referenced in the table below:

Material	Yield Factor (g/cc)	2024 Avg.CDI (\$/lb.)*	Yield vs. PS (lbs.)	Total Spend
HIPS	1.04	\$0.931	1,000,000	\$930,833
PVC	1.35	\$0.472	1,230,000	\$580,130
PET	1.33	\$0.893	1,220,000	\$1,089,867
PETG**	1.27	\$2.00	1,180,000	\$2,360,000
PP	0.91	\$0.544	880,000	\$478,500

\*Source: ICIC Polypropylene CDI Americas

\*\* Source: Based on estimated industry average for PETG in US market



## Reduced Carbon Footprint

Mounting public pressure and increasing environmental concerns have led healthcare companies to seek more sustainable alternatives to current packaging materials. XPP offers a reduced carbon footprint throughout the product lifecycle and meets industry-standard guidelines for recyclability:



**No Problematic Materials per US Plastics Pact**



**Widely Recycled per How2Recycle (RIC #5)**



**Preferred Material per APR Design Guide**



### LIFE CYCLE ANALYSIS:

Material	HIPS to PP	PET to PP	PETG to PP	PVC to PP
<b>Fossil Fuel Use</b>	-20.2% Reduction	-28.6% Reduction	-41.2% Reduction	-13.9% Reduction
<b>Barrels of Oil</b>	-28.0 Reduction	-44.5 Reduction	-77.9 Reduction	-18.0 Reduction
<b>Global Warming Potential (ton CO2 eq.)</b>	-40.5% Reduction	-43.2% Reduction	-53.3% Reduction	-37.0% Reduction
<b>Gasoline Consumed</b>	-7,299 L Reduction	-8,144 L Reduction	-12,237 L Reduction	-6,311 L Reduction

\*LCA based on 7 x 3.50 (10.2 gram) Medical Tray at 1,000,000 Trays.



## Planning for the Long-Term

Sustainability and recyclability will continue to be top-of-mind for governments, consumers, and industries, which is why it's important to invest in the right solution now. Choosing your material carefully ensures that you won't have to validate new materials again in two years. XPP-M is a safe bet for the future delivering a sustainable, safe, cost-effective, and recyclable solution making it a strong component of the circular economy for years to come. **Looking for a sustainable & recyclable solution for your thermoformed medical packaging? Contact Impact Plastics to learn more.**

