IMPROVE ASSURANCE OF SUPPLY WITH THE NEW PETG

Looking to reduce supply chain risk for your PETG packaging materials?

PETG materials play a critical part in the greater medical packaging supply chain to protect essential medical devices & products. But recent disruptions and challenges have called into question the reliability of the PETG supply chain in the US.

Medical OEMs need to develop a second source for their PETG packaging materials to reduce supply chain risk: one that delivers on **performance, safety, reliability & provides a more cost effective alternative** to current materials. **PETG 1773** is the ideal solution.

This material is produced from a new supply of resin & rollstock to provide a secondary source of medical-grade PETG to mitigate supply chain risk in a traditionally sole-sourced market.

Technical Comparison

PETG 1773 has been designed to provide the same safety, regulatory, performance and technical specifications as industry-standard solutions to offer hassle-free integration into existing thermoforming & form-fill-seal processes:

Property	Test Method	Impact 1773	Incumbent Solutions
Specific Density	ASTM D 792	1.27 g/cm³	1.27 g/cm³
Tensile Stress @ Yield	ISO 527 - 1/-2	47 MPa	50 MPa
Tensile Modulus	ISO 527 -1/-2	1810 MPa	2100 MPa
Flexural Modulus	ISO 178	1650 MPa	2000 MPa
Notched Izod 23°C; 50% RH	ISO 180/A	6.0 kJ/m²	6.2 kJ/m²
Unnotched Izod 23°C; 50% RH	ISO 180/U	No Break	No Break
Heat Deflection Temp, 0.45 MPa	ISO 75 -1/-2	68.1°C	70°C

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Regulatory, Benchmarking & Equivalency

Testing, certification & benchmarking play a crucial role in the selection of materials for medical packaging applications. **PETG 1773** has undergone extensive testing to ensure compliance with industry standards & suitability for use in sterile medical packaging applications:

Property	Test Method	Impact 1773	Incumbent Solutions
Polymer Chemistry/Amorphous	FTIR	Same CHDM monomer backbone wavelength	
Sterilizability - EtO	EtO Chamber at 2x EtO	No Effect	No Effect
Sterilizability - Gamma	Gamma chamber at 43Kgy Gamma	No Effect	No Effect
Accelerated Aging -T1, T3*	ASTM F 1980	Pass	Pass
Extrusion	Single & Coextrusion	Yes	Yes
Thermoforming	Maac Thermoformer	No Change	No Change
Heat Sealing	Sonoco Alloyd Aergo	260 F	260F
Visual Inspection - T0, T1, T3, T5	Seal Integrity (ASTM F 1886)	Pass	Pass
Dye Leak - T0, T1, T3, T5	Seal Integrity (ASTM F1929)	Pass	Pass
Seal Strength - T0, T1, T3, T5	ASTM F88 (lbs/in)	2.07	1.99
FDA Compliance	21 CFR 177.1315 [b] [1]	Yes	Yes
EU Compliance	EU 10/2011	Yes	Yes
Biocompatibility	USP Class VI & ISO 10993	Yes	Yes

*T5 Results Pending

Supply Chain Redundancy & Risk Mitigation

The critical function of PETG materials in the medical packaging supply chain combined with the limited flexibility for substitutes necessitates a dependable, reliable and stable source to ensure the protection of lifesaving medical devices and products.

Now is the time to mitigate that risk and take back control of your PETG supply chain with a more reliable and cost-effective product. **Looking to develop a secondary source for your PETG packaging materials? Contact Impact Plastics to learn more.**

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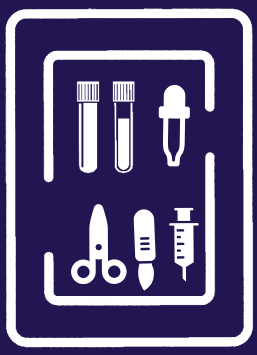
IMPACTASSURE™
MEDICAL PACKAGING SOLUTIONS

6 Reasons to Switch to PETG from Impact Plastics

PETG materials play a critical role in the medical supply chain. Explore the benefits of PETG from Impact Plastics:



1. Risk Mitigation

New material supply source mitigates risk of supply chain disruptions and long lead times.

2. Supply Chain Redundancy

Second source validation provides assurance of supply for critical packaging materials.

3. Material Certifications

Compliant with: [1] EU NR 10/2011 [2] US FDA 21CFR177.1315 [b] [1] [3}] USP Class VI & Cytotoxicity per ISO 10993-5:2009

4. Qualification & Validation

Rollstock compliant with required certifications for substitution in current applications.

5. Advanced Technology & Reliable Infrastructure

Brand new state-of-the-art extrusion capabilities & infrastructure produced under ISO 9001:2015 Quality Management System.

6. Maintains Material Performance

Sterilization-compatible materials exhibit high clarity, low shrink, high stiffness, and excellent high & low temperature use.

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1773 PETG

PETG Rollstock

Impact 1773 is PETG rollstock with excellent clarity, surface gloss, and neutral edge color designed for thermoformed medical packaging, medical device and pharmaceutical applications. 1773 PETG is ideal for applications requiring demanding performance and toughness, including impact strength at low temperatures and good chemical resistance. This material is compatible with sterilization techniques including Eto amd Gamma sterilization methods. 1773 PETG is available in thin-gauge rollstock from .010" - .060".

Properties	ASTM Test	Typical Value*
Specific density	ASTM D-792	1.27 g/cm^3
Tensile stress at yield	ISO 527 -1/-2	47 MPa
Tensile modulus	ISO 527 -1/-2	1810 MPa
Flexural modulus	ISO 178	1650 MPa
Notched izod - 23°C; 50% RH	ISO 180/A	6.0 kJ/m^2
Unnotched izod - 23°C; 50% RH	ISO 180/U	No break
Heat deflection temperature, 0.45 MPa	ISO 75 -1/-2	68.1 °C

* This information reflects typical values and are not to be construed as specifications

Approvals

1. 1773 PETG is compliant with European Regulation Nr 10/2011 on Plastic Food Contact materials
2. 1773 PETG is compliant with FDA 21CFR 177.1315 (b) (1)
3. 1773 PETG meets the requirements of USP Class VI & Cytotoxicity Test per ISO 10993-5:2009 for use in medical and pharmaceutical applications.
4. BPA and styrene free
5. SDS sheets available upon request to help customers satisfy their safety needs

Customization

- Monolayer extrusion
- Clear

Certifications

1773 PETG is manufactured in a plant whose Quality Management System is certified as being in conformity with ISO 9001:2015 and FSSC 22000 V5.1 Food Packaging Material Manufacturing (Impact South only).

FSSC 22000 CERTIFICATION™ Intertek · FSSC 22000 · ANAB ACCREDITED ISO/IEC 17021 MANAGEMENT SYSTEMS CERTIFICATION BODY · Certified to ISO 9001:2015 · TÜVRheinland® Precisely Right.

* All tests were run under laboratory conditions, ASTM (where applicable) testing procedures. The data are intended as a general guide only and do not necessarily represent results that may be obtained elsewhere. The use of Impact products must be guided by the users own methods for selection of proper formulation. Impact Plastics disclaims any responsibility for misuse or misapplication of its products. Impact Plastics makes no warranty of merchantability and there is no warranty that goods supplied shall be fit for any particular purpose. Impact's liability and customer's exclusive remedy for any claims arising out of sales of its products are expressly limited at customer option to replacement of non-conforming goods or payment not to exceed the purchase price plus transportation charges thereon in respect to any material for which damage is claimed.