

UHMW Polyethylene (UPC-15 HT)

UPC-15 HT is an ultra-high molecular weight (UHMW) polyethylene-based material primarily used for medical implantable applications. (Ref Bal Seal document RT-63, Section 9.0)

UPC-15 HT has excellent wear resistance in water and other aqueous applications, and is suitable for low-speed, low-pressure service at temperatures ranging from -450°F to $+180^{\circ}\text{F}$ (-268°C to $+82^{\circ}\text{C}$). It can be used for food contact applications.

Chemical Compatibility

UPC-15 HT performs well in water and other aqueous solutions. It is suitable for use in contact with ketones, alcohols, amines and esters and has limited applications in contact with oxidizing acids and chlorinated solvents. It is suitable for sterilization using gamma radiation. For more compatibility information, request report TR-60A, or go to www.balseal.com/techlib. Select Technical Reports, then select TR-60A Chemical Compatibility Guide.

FDA and USP Compliant

UPC-15 HT is an FDA compliant resin suitable for use in food contact. It meets FDA Regulation 21 CFR 177.1520, USDA and USP XXIII, Class VI requirements.

FDA Compliant: Bal Seal defines "FDA Compliant" as materials that have been found by the FDA to be "safe for use in food contact" or "acceptable for use in food contact."

Mechanical Properties

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|-----------------------|-----------|-------------------------------------|
| Tensile Strength, Min | ASTM D638 | 5,000 PSI (352 kg/cm ²) |
| Elongation, Min | ASTM D638 | 300% |

Color

White/translucent

Cost

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Typical Applications (all requiring pre-approval)

- Implantable medical devices
- Joint arthroplasty, replacements
- Orthopedic applications
- Surgical reconstruction applications
- Applications that come in contact with bodily fluids

Other Information

For additional information, please contact a technical sales representative. Bal Seal maintains a vast library of material references and test information.

It is essential that the customer run evaluation testing under actual service conditions with a sufficient safety factor to determine if the proposed, supplied or purchased Bal Seal Engineering products are suitable for the intended purpose and to confirm expected results. Bal Seal Engineering makes no warranty, express or implied, regarding Bal Seal Engineering products or of the information contained herein, including but not limited to, warranties of merchantability, performance, and fitness for a particular use or purpose. Bal Seal Engineering shall not be liable for any loss or damage of any kind or nature that may result from the use of, reference to, or reliance on, the information contained herein, including, but not limited to, consequential, special (including loss of profits) direct, indirect, incidental, or similar damages, even if Bal Seal Engineering has been advised of the possibility of such damages. © 2014 Bal Seal Engineering, Inc. All rights reserved. M 67 Rev. NC (623-78) 1-21-14

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