



# Polymer-Filled Polyether Ether Ketone for High Temperature Applications (P170)

Material Data Sheet  
M-70 (Rev. 01; 12-15-20)

19650 Pauling  
Foothill Ranch, CA  
USA 92610-2610  
O +1 949 460 2100  
F +1 949 460 2300

Jollemanhof 16, 5th floor  
1019 GW Amsterdam  
The Netherlands  
O +31 20 638 6523  
F +31 20 625 6018

Suite 901, Chinachem  
Century Tower  
178 Gloucester Road,  
Wanchai, Hong Kong  
O +852 28681860  
F +852 22956753

[www.balseal.com](http://www.balseal.com)



## Overview

P170 is a Polyether Ether Ketone (PEEK) blend, designed for sealing viscous and abrasive materials in scraping applications at elevated temperatures.

P170 exhibits high temperature and extrusion resistance, and has an operating temperature range from  $-70^{\circ}\text{F}$  to  $600^{\circ}\text{F}$  ( $-57^{\circ}\text{C}$  to  $316^{\circ}\text{C}$ ) under dynamic conditions. It is not recommended for sealing in applications below  $150^{\circ}\text{F}$  ( $65^{\circ}\text{C}$ ).

## Chemical Compatibility

P170 offers excellent chemical resistance to most fluids and gases; however, it is not recommended for use with sulfuric and nitric acids.

## FDA Compliance

P170 is not FDA compliant.\*

## Color

Brown\*\*

## Heat Treatment

Certain seal sizes are supplied as P170 HT. The “HT” denotes our use of a heat treatment process to limit dimensional changes. Material properties and composition remain the same.

\*Bal Seal Engineering defines “FDA compliant” materials as compositions found by the FDA to be “safe for use in food contact” or “acceptable for use in food contact,” and to contain no ingredients on the California Code of Regulations Hazardous Substance List (<https://www.dir.ca.gov/title8/339.html>).

\*\*Color variations may occur during processing. These variations do not affect the properties or performance of the seal.

## Mechanical Properties of P170

| Tensile Strength<br>(typical) | Elongation<br>(typical) | Hardness<br>(typical) |
|-------------------------------|-------------------------|-----------------------|
| 16500 psi                     | 6%                      | 87 ShoreD (63 Rc)     |

## Advantages of P170

- Superior tensile strength
- Excellent extrusion resistance
- Excellent chemical compatibility
- Performs in temperatures up to 600 °F (316 °C), depending upon the application

## Typical applications for P170

- Hot melt/glue gun applications
- Scraping applications at elevated temperatures
- Sealing viscous materials at elevated temperatures

For more information, contact a technical sales representative, or e-mail us at [solutions@balseal.com](mailto:solutions@balseal.com).

The information, descriptions, recommendations and opinions set forth herein are offered solely for your consideration, inquiry, and verification and are not, in part or in whole, to be construed as constituting a warranty, expressed or implied, nor shall they form or be a part of the basis of any bargain with Bal Seal Engineering. If any sample or model was shown to or provided by Buyer/User, such sample or model was used merely to illustrate the general description and type of goods. Such use is not to be construed as a warranty that the goods will conform to the sample or model. Furthermore, THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES, IMPLIED OR EXPRESSED, ARE EXCLUDED AND SHALL NOT APPLY. This document provides product options for further investigation by Buyers/Users having technical expertise. The Buyer/User, through its own analysis and testing, is solely responsible for making the final selection of the products and for assuming that all performance, safety and warning requirements for the application are met. It is recommended that Buyers/Users run evaluation testing under actual service conditions to determine whether proposed Bal Seal Engineering products are suitable for the intended purpose. Nothing contained herein or in any of our literature shall be considered a license or recommendation for any use that may infringe patent rights. (LE-17)