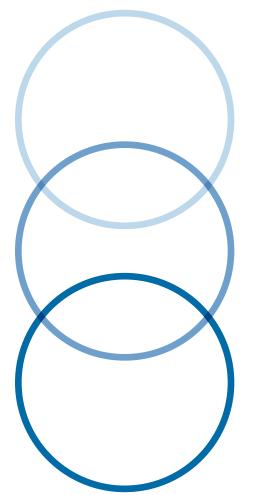


Custom components that drive tomorrow's technologies.®



Polymer-Filled Polytetrafluoroethylene (SP45)

Material Data Sheet M-15 (Rev. 01, 03-14-23)

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Overview

SP45 is a general-purpose material formulated for contact with shafts and housings that are made from 300 series stainless steel, aluminum, and other soft metallic or plastic materials. SP45 material has low abrasion resistance to mating parts. The material's high PV (pressure-velocity) limits make it suitable for sealing most media, including various liquids and gases, at high speeds and low to moderate pressures. SP45 is recommended for general service applications at temperatures from -450 to +500 °F (-268 to +260 °C). It may be used in food contact applications.

Chemical Compatibility

SP45 has excellent chemical compatibility. This material is compatible with most fluids and gases, but it is not recommended for use with sulfuric and nitric acids, alkali metals, chlorine, fluorine, lithium, potassium, and sodium at high temperatures. (For more compatibility information, request report TR-60A, or go to www.balseal.com/ technical-library/technical-reports.)

FDA Compatible

SP45 is "FDA compatible" for use in food contact. Bal Seal Engineering defines "FDA compatible" as compositions in which the majority (97% or more) of the ingredients are designated by the FDA as "safe for use in food contact," and which contain no ingredient listed in the California Code of Regulations Hazardous Substance List (https://www.dir.ca.gov/title8/339.html).

Color

Light green.





Mechanical Properties of SP45

Typical mechanical properties of SP45 at ambient temperatures:

Tensile Strength	Elongation
(ASTM D638)	(ASTM D638)
3,000 psi (211 kg/cm2)	315%

Advantages of SP45

(For comparative material data, please refer to technical report TR-8A, "Properties of Bal Seal® Polymer Materials")

- Low abrasion to soft materials
- High PV operating limits in most liquid and air applications
- Material maintains its properties at high speeds

Other Information

For additional information, please contact a technical sales representative at one of our offices nearest you. Bal Seal Engineering maintains a vast library of material references and testing information.

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