MATERIAL TECHNICAL DETAILS: (FOR PART NO’S: 130050460214, 130050460204)



**1. Steel backing:**

This steel backing gives its exceptionally high load carrying capacity; thin, compact design; excellent heat dissipation; and dimensional and structural rigidity.

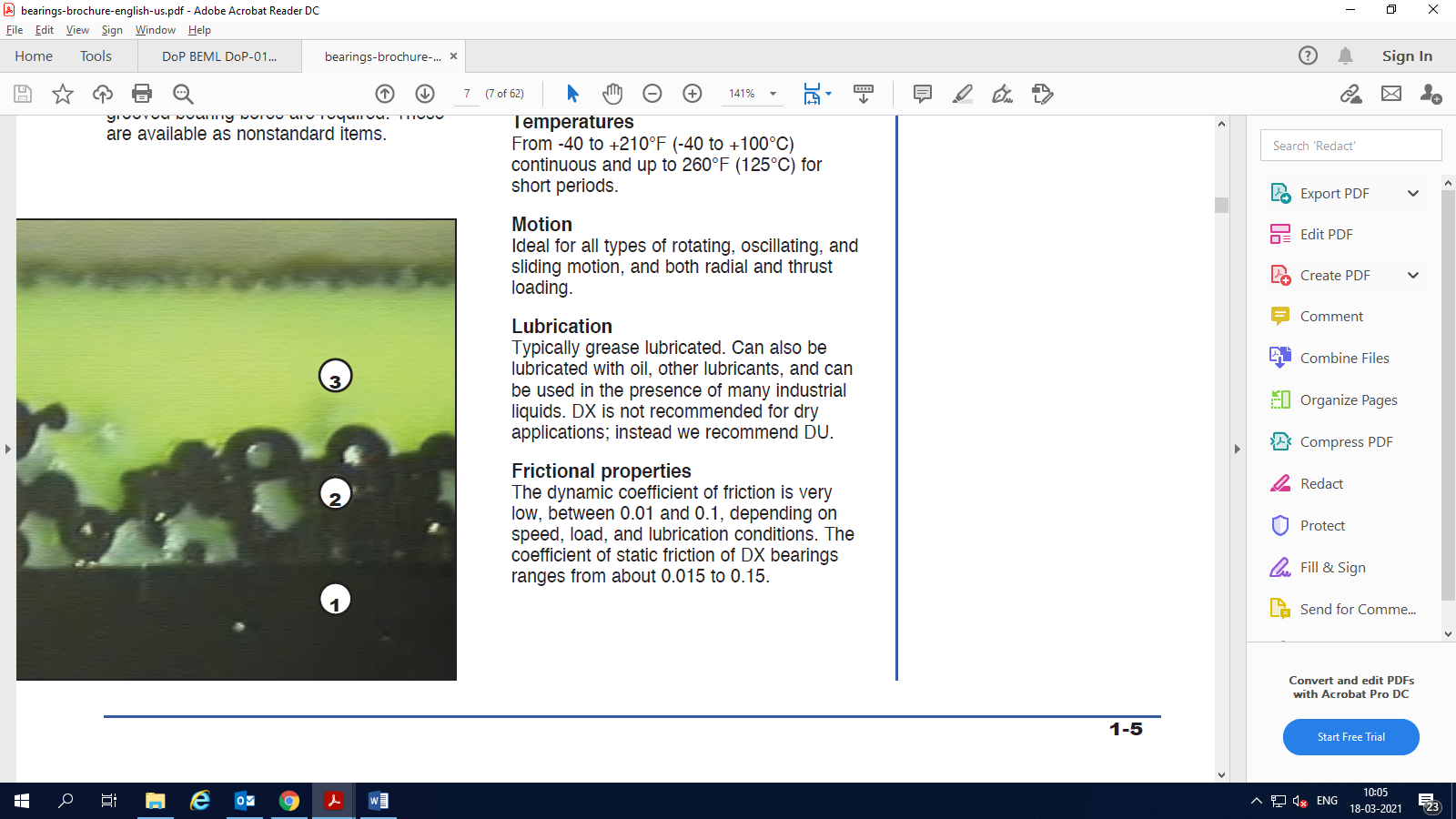
**2. Porous bronze inner structure:**

This comprises a nominal 0.010 inch (0.25 mm) thick layer of carefully sized bearing quality bronze powder which is sintered onto the steel backing. This porous structure is impregnated with a homogeneous mixture of PTFE (polytetrafluoroethylene) and lead. In addition to providing maximum thermal conductivity away from the bearing surface, this unique bronze inner structure also serves as a reservoir for the PTFE-lead mixture.

**3. PTFE-lead overlay:**

This low friction overlay, approximately 0.001 inch (0.025 mm) thick, provides an excellent initial transfer film which effectively coats the mating surface of the bearing assembly, forming an oxide type solid lubricant film. As this film is depleted, the relative motion of the mating surface continues to draw material from the porous bronze layer. When conditions are severe, the feed of lubrication is increased. The peaks of porous bronze coming in contact with the mating surface generate localized heat and, e to the high thermal expansion rate of the PTFE, force additional lubricant to the bearing surface. The relative motion of the mating parts wipes the lubricant over the interface, continuously restoring the low friction surface film.

FOR PART NO: 111111859000



**1. Steel backing**

This steel backing is the key to the exceptional strength; thin, compact design; excellent heat dissipation; and dimensional and structural rigidity. This rugged, steel backing also provides a good interference fit in metallic housings throughout the temperature range for the bearing.

**2. Porous bronze inner structure**

This comprises a nominal 0.010-inch (0.25 mm) layer of carefully sized, bearing quality bronze powder sintered onto the steel backing. This porous bronze inner layer is impregnated with the acetal resin and is

securely sintered to the steel. The bronze also serves as an effective heat conductive path which minimizes undue temperature rise at the bearing surface and provides dimensional stability.

**3. Acetal resin liner**

The acetal resin forms a nominal 0.010-inch-thick (0.25 mm) liner that gives the bearing its distinctive yellow color. This acetal resin has the outstanding property of high wear resistance and low friction even when only minute quantities of lubricant are supplied to the polymer surface. Although bearings only have moderate performance in the complete absence of lubricant, the response of the polymer provides superior bearing performance in the presence of even a trace of conventional oil or grease. Under conditions of marginal lubrication or those which do not favour the formation of a complete oil film—oscillating or fretting conditions, high loads, low speeds, frequent stop/start or starting under load— is the preferred material. The bearing surface carries a pattern of circular indents which must be filled with grease on assembly of the bearing. The pattern is so designed that every point on the bearing surface is supplied with lubricant from an indent by the rotation of the mating surface. There may be occasions when non-indented or grooved bearing bores are required.