

Introduction to Bray Materials Selection Guide

The Bray Materials Selection Guide for butterfly valve seats and discs is intended to be used exactly as its name implies - as a "guide" to aid in selection of the most cost effective butterfly valve materials. The information tabulated herein is based upon valve usage experience, data from elastomer, metal and other suppliers, data from customers and experienced elastomer compounders, and data from published references and literature. Though Bray believes the material recommendations to be valuable in selecting appropriate materials, one must recognize there are a variety of factors which exist for each specified field application. Some of the factors which must be considered are temperature, concentration, velocity, aeration, pressure, presence of other materials in the media, operating frequency, flow conditions, suspended abrasive particles, etc. Each of these factors may have a severe effect on the performance of the material. In addition, these factors can exist in field applications in an endless number of different combinations. As a result, it is not possible to develop a material recommendation chart which accounts for all the given combination of factors for each corrosive media. In addition, the grade of elastomers and compound itself will determine elastomer performance. With this understanding, Bray explicitly states:

No representation, guarantee, warranty, or responsibility, express or implied, is made by the Bray Material Selection Guide herein because of the complexity and infinite combinations of concentration mixtures, flow conditions, temperatures, and other application factors possible in actual service. All responsibility regarding the suitability of materials chosen for an application lies solely with the customer and/or engineering company hired by the customer to assist him. Bray cannot guarantee the accuracy of this Material Selection Guide nor assume responsibility for the use thereof. If one is in doubt, it is always best to test first.