

Chemical Guides Introduction

The Chemical Guides in this section are offered as a general indication of the compatibility of the various compounds incorporated in Parker hose with the chemicals, fluids and media listed. The basis for the ratings includes actual service experience, the advice of various polymer suppliers, and the considered opinion of our chemists. When in doubt, a sample of the compound should always be tested with the particular chemical and temperature it is to handle.

Some of the variables that affect the resistance of a compound to a chemical attack are:

- 1. Temperature of the Media Transmitted:** Higher temperatures increase the affect of chemicals on compounds. The amount of increase depends upon the polymer and the chemical. A compound quite suitable at room temperature might fail very quickly at higher temperatures. Working pressures in this catalog are recommended in accordance with ARPM design safety factors at ambient temperatures. Do not operate outside hose temperature limits. Even within hose temperature limits, end fittings and hose size can affect performance at higher temperatures.
- 2. Service Conditions:** A rubber compound usually swells when exposed to a chemical. Within a given percent of swell, a hose tube may function satisfactorily if the hose is in a static condition, but may fail quickly if the hose is subject to flexing.
- 3. The Grade or Blend of the Rubber Compound:** Basic polymers are sometimes mixed or blended to enhance a particular property for a specific service. As an example, the nitrile used as the tube material for Parker aircraft fueling hose varies in its makeup from the nitrile used in the tube of Day-Flo® Special Purpose hose. Consequently, the reaction to a particular chemical may therefore be somewhat different. When in doubt, a sample of the compound should always be tested with the particular chemical it is going to handle.