

What Sanitary Gasket Material Should I Use? Check out our Chemical Compatibility Guide!

With so many options available for elastomers it can be hard to make sure you are selecting the one best suited for your application. This post is going to go through a few key questions to point you in the right direction.

Let's start by asking a few important questions about your application:

- What temperature is your process running at?
- How are you cleaning your system?
- What are you trying to seal?

Once we figure out the answers to those questions, we can start by looking at the three most common elastomers used in the high purity process industry- FKM, Buna, and EPDM. We're going to leave PTFE out because it isn't an elastomer- it's a plastic.

FKM and EPDM can handle high temperatures well and with an upper operating temperature of up to 200 degrees Celsius they are the clear choice for high temperature applications. EPDM is great with steam but does not mix well with oils. And FKM doesn't perform well at low temperatures, with a lower operating temp of minus 10 degrees Celsius.

Accordingly, if you are planning on either SIP or CIP, you'll want to go with FKM or EPDM. SIP uses steam to heat the process line up to at least 120 degrees Celsius, which will cause some strain on your elastomers. If you are going to be running steam frequently through the process lines, then FKM or EPDM are a good choice for you due to its resiliency against steam and its ability to tolerate the temperature.

For CIP applications, all three elastomers provide good resistance to both acidic and caustic solutions commonly used in CIP procedures although Buna does not tolerate concentrated acids very well.

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Before installing a new gasket or any other component that contains elastomers, you should always make sure that it is chemically compatible with your process fluid. In general, FKM is fairly inert compared to both Buna and EPDM and is well suited to most applications. A Chemical Compatibility Chart is available below to check your specific application.

By selecting the proper elastomer, you may be able to stretch out the time between replacements. When it is time to replace them or if you have any questions please contact your Inside Sales Representative at Tri-Canada.