

Saunders

GRADE E5 EPDM DIAPHRAGMS



The E5 EPDM diaphragm is based on the same formulation as the 325 (ethylene, propylene terpolymer, organic peroxide cured). In addition, E5 is post cured in an air circulating oven for 144 hours at 240°F (127°C). Then, it is washed in a detergent according to FDA specification.

Peroxide cured elastomers provide the maximum heat stability and the best compression set that a polymer is capable of achieving. Sulfur is not present in the compound, which reduces thermal stability and resistance to oxidative chemical attack. In addition, the lack of sulfur lessens the risk of process poisoning in some biotechnology applications.

E5 EPDM is certified to USP 23, Section 88, plastic classes I through VI. The tests are designed to determine the biological response to elastomers and plastics used in medical devices, implants and other systems.

Some manufacturers, especially in biotechnology, apply their own stringent requirements for elastomers that are in contact with their ultra sterile processing. Testing of elastomers for diaphragms is conducted under more arduous conditions than those laid down in USP 23. For example, different solvents are used for extraction (simulating the process). Also, the elastomer may be even more finely divided, increasing the available surface area for testing. Post curing reduces the levels of extractables and volatiles in the elastomer. E5 EPDM Diaphragms meet even these more stringent requirements.

Grade E5 EPDM Diaphragm Characteristics:

- Size range: 1/4"-4" (DN8-100)
- Temperature performance: -40-285°F (-40-140°C) normal, with 302°F (150°C) for short steam cleaning cycles
- Certified to USP 23, Section 88, Classes I to VI
- FDA compliant to para 177.2600 of Section 21 code of Federal Regulations revised April 1, 1996
- Full manufacturing traceability to EN 10204
- Manufactured in house
- Post cured 144 hours at 240°F (127°C) with lower extractables and volatiles
- Non sulfur based for improved heat, chemical resistance and biotechnology applications
- Chemically pure grade ingredients - applies to pyrene content of carbon black and heavy metal content of fillers
- Quality control of incoming raw materials used in elastomer formulations