



DuPont™ Kalrez® LS390

Perfluoroelastomer Parts

For Pharmaceutical and Food Handling Applications

Technical Information — August 2015

Product Description



Standard Black Sanitary Seal

Kalrez® LS390 Sanitary Seal

DuPont™ Kalrez® LS390 perfluoroelastomer parts are a grey product for use as sanitary seals in food handling, beverage, and pharmaceutical applications where FDA, USP <87> and <88> Class VI compliance are required. In addition, Kalrez® LS390 parts also meets Japan Pharmacopeia, edition 16*.

LS390 parts provide excellent chemical resistance (Table 1) to process chemicals, WFI (water for injection), as well as SIP and/or CIP processes, which helps increase MTBR (Mean Time Between Repair). LS390 sanitary seals have demonstrated low stiction

properties and high hardness/modulus to make LS390 parts an excellent choice for sanitary seal applications. These properties also facilitate sanitary seal piping disassembly. Because of its unique grey color, LS390 parts are easy to identify for proper material selection and application. A maximum application temperature of 220 °C (428 °F) is suggested.

For use in applications other than sanitary seals, please contact your DuPont™ Kalrez® perfluoroelastomer parts representative.

Typical Physical Properties¹

Color	Grey
Maximum Application Temperature ² , °C (°F)	220 (428)
Durometer, Shore A ³	88
100% Modulus, MPa (psi)	11.16 (1618)
Tensile Strength at Break ⁴ , MPa (psi)	18.60 (2699)
Elongation at Break ⁴ , %	147
Compression Set ⁵ , %, AS568-214 O-ring, 70 hr at 200 °C (392 °F)	30

¹ Not to be used for specification purposes

² DuPont proprietary test method

³ ASTM D2240 (plied sheet test specimen)

⁴ ASTM D1414

⁵ ASTM D395B

*For additional information on FDA compliance, please refer to Food Contact Notification (FCN) number 1116. USP <87> and <88> class VI compliance was tested at 121°C Japan Pharmacopeia, edition 16 requirements for section 7.03 – Rubber Closure for Aqueous Infusions.



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Table 1: Chemical Immersion Data⁶ – % Volume Swell (502 hrs. exposure)

Chemical/Product	Temp. °C	Kalrez® LS390	Kalrez® LS205	Kalrez® 6230
Distilled water (SIP)	130	6	8	1
CIP-100 ⁷	70	1	1	0
CIP-200 ⁷	70	1	1	1
Bleach	70	1	0	-1

⁶ ASTM D471 (size AS568-214 O-rings)

⁷ Steris Life Sciences



Seal & Design
Corporate Headquarters
Ph: (716)-759-3344
Info@SealAndDesign.com
www.SealAndDesign.com