

# DuPont™ Kalrez® CP222

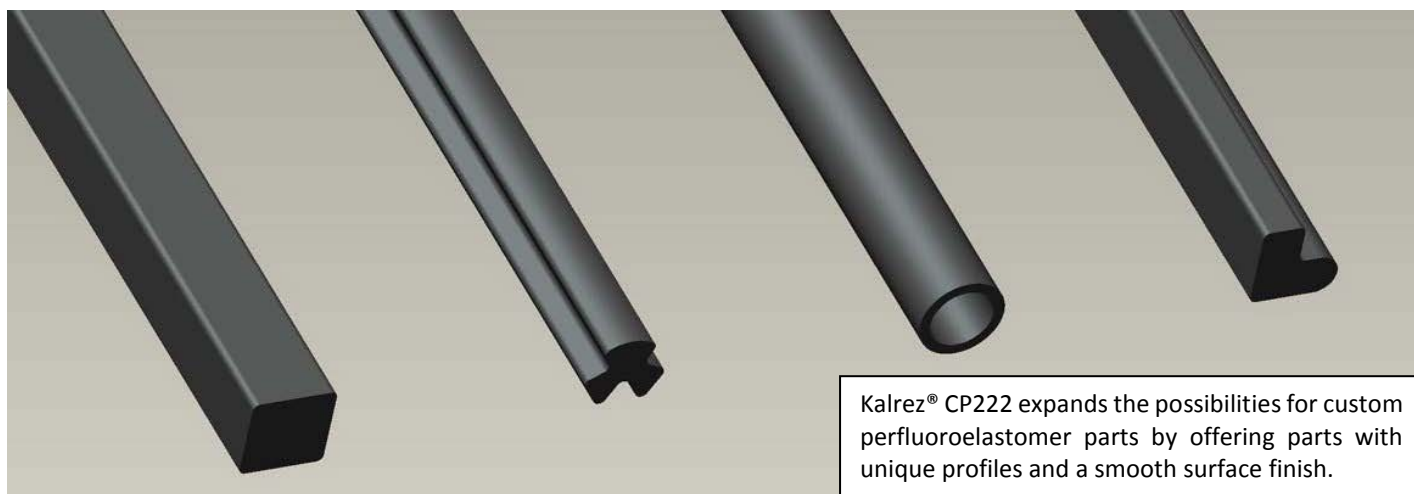
For Custom Shapes & High Volume Applications

Technical Information - Rev. 1, July 2019

## Product Description

DuPont™ Kalrez® CP222 perfluoroelastomer parts are the latest product for unique custom shapes or high volume applications. Kalrez® CP222 parts offer outstanding chemical resistance and mechanical properties and continue the DuPont tradition of providing high value in use perfluoroelastomer parts to extend mean time between repair (MTBR).

In addition to high volume O-ring applications, Kalrez® CP222 can be manufactured in various custom geometries that were once beyond the reach of perfluoroelastomers. Now Kalrez® parts can be designed to fit in complex new equipment or can be a performance upgrade in existing applications.



Kalrez® CP222 expands the possibilities for custom perfluoroelastomer parts by offering parts with unique profiles and a smooth surface finish.

## Chemical Resistance

For many applications, low volume swell of elastomers is critical to proper operation of equipment. Excessive swell may cause premature equipment downtime due to seal failure and leakage of the lubricating fluids. Volume swell is an excellent predictor of performance; however, other physical property testing is needed to further define product performance.

The following chemicals represent some of the most aggressive applications in the industry. These test results are an indication of performance; however, all applications are unique, and it is strongly recommended that immersion testing be performed in the actual process fluids.

Volume Swell <sup>1</sup> (% Change) after 672 Hours	Temperature °C (°F)	Kalrez® CP222
Steam	225 (437)	A
Sulfuric Acid (96-98%)	150 (302)	A
Ethylenediamine	90 (194)	Not recommended
Toluene	100 (212)	A

<sup>1</sup>AS568 K214 O-ring test specimens

Rating system: A: 0–10% volume swell, B: 10–20% volume swell, C: >20% volume swell

In addition to unique shapes, Kalrez® CP222 can be manufactured into calendered or reinforced sheet for various applications.



### Typical Physical Properties<sup>1</sup>

### Kalrez® CP222

Color	Black
Hardness <sup>2</sup> , Shore A	77
100% Modulus <sup>3</sup> , MPa (psi)	8.91 (1292)
Tensile Strength at Break <sup>3</sup> , MPa (psi)	20.93 (3036)
Elongation at Break <sup>3</sup> , %	177
Compression Set <sup>4</sup> , %, 70 hrs. at 204 °C (400 °F)	21
Maximum Service Temperature <sup>5</sup> , °C (°F)	225 (437)
Lowest Service Temperature <sup>5</sup> , °C (°F)	-12 (10)

<sup>1</sup> Not to be used for specification purposes

<sup>2</sup> ASTM D2240 (Plied slab test specimens)

<sup>3</sup> ASTM D412 (Dumbbell test specimens)

<sup>4</sup> ASTM D395B & D1414 (AS568 K214 O-ring test specimens)

<sup>5</sup> DuPont proprietary method; performance will vary with seal design and application specifics

Visit us at [kalrez.com](http://kalrez.com)

dupont.com



The information set forth herein is furnished free of charge, is based on technical data that DuPont believes to be reliable, and represents typical values that fall within the normal range of properties. This information relates only to the specific material designated and may not be valid for such material used in combination with other materials or in other processes. It is intended for use by persons having technical skill, at their own discretion and risk. This information should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards and comply with applicable law. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

**CAUTION:** Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with the DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative.

DuPont's sole warranty is that our products will meet our standard sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DUPONT SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR NON-INFRINGEMENT. DUPONT DISCLAIMS LIABILITY FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, ® or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted.

© 2019 DuPont. All rights reserved.

(06/12) Reference number KZE-A11031-00-C0719