

DuPont™ Kalrez® W240UP Perfluoroelastomer Parts

For Semiconductor Wet Applications

DuPont™ Kalrez® W240UP perfluoroelastomer parts are designed for semiconductor wet processes, such as wafer cleaning tools, wet etch tools, coater developer tools, and filters/pumps/valves. Kalrez® W240UP can help increase process reliability and meet market needs in demanding wet applications.

Kalrez® W240UP continues the DuPont tradition of providing high value in use perfluoroelastomer parts to extend equipment Mean Time Between Repair (MTBR), while offering an excellent combination of properties, including:

- Resistance to acids and bases at maximum service temperatures up to 230 °C (446 °F).
- Low metal extractables.

It is an effective alternative to other typical perfluoroelastomer parts used in semiconductor wet processes.

Performance Comparison: Kalrez® W240UP vs. Kalrez® 6375UP

Kalrez® W240UP parts and Kalrez® 6375UP parts have comparable physical properties. Kalrez® W240UP can be a suitable alternative to Kalrez® 6375UP in applications with operating temperatures up to 230 °C.

Typical Physical Properties	Kalrez® 6375UP Parts	Kalrez® W240UP Parts
Color	Black	Black
Hardness, Shore A	75	76
100% Modulus, MPa	9.1	6.9
Tensile Strength at Break, MPa	15.2	15.9
Elongation at Break, %	160	158
Compression Set, 70 hr @ 204 °C, %	25	26
Maximum Service Temperature, °C	275	230

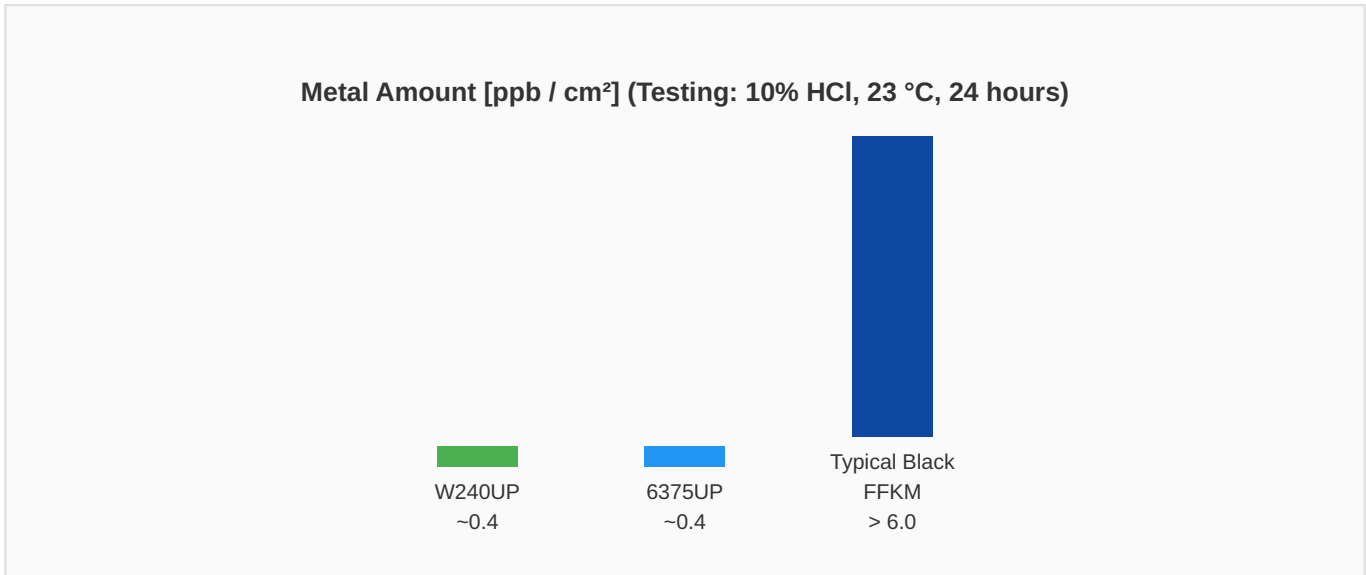
Chemical Resistance

Chemical immersion tests performed in our laboratories did not highlight significant differences in terms of chemical resistance between Kalrez® W240UP parts and Kalrez® 6375UP parts.

Immersion Chemistry (Concentration)	Exposure Conditions	% Vol Change (W240UP)	% Vol Change (6375UP)
dHCl (3.5%)	23 °C, 672 hr	<0.1	<0.1
HF (49%)	23 °C, 672 hr	2.3	1.7
HNO3 (70%)	23 °C, 672 hr	0.6	0.6
PGMEA (> 99.5%)	23 °C, 672 hr	0.1	0.1
NH4OH (29%)	23 °C, 672 hr	<0.1	<0.1
H2SO4 (98%)	90 °C, 672 hr	0.6	0.7
IPA (99.9%)	80 °C, 672 hr	2.4	2.5
H3PO4 (85%)	80 °C, 672 hr	<0.1	<0.1

Metal Extractables per O-ring Surface Area

Kalrez® W240UP has comparable metal extractable performance to Kalrez® 6375UP, and very low metal extractables compared to typical FFKM used in the industry.



The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable. It is intended for use by persons having technical skill, at their own discretion and risk. This data should not be used to establish specification limits. DUPONT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND ASSUMES NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION.

CAUTION: Do not use in medical applications involving permanent implantation in the human body.

