

ASNA PERFREZ® PXC

High performance seal solution for harsh semiconductor applications

Technical Data Sheet (Oct 2022)

Designed for physical strength and Chemical Compatibility

PERFREZ® PXC is a specialized line of Perfluoroelastomers for semiconductor equipment with harsh conditions and excels especially at major foreline and pump lines. PXC also offers excellent resistance to a wide variety of chemistries including acids/bases which makes it a great alternative for wet applications. PXC has a maximum continuous service temperature of 240°C and can withstand heat excursion up to 260°C.



Features and Benefits

- Broad chemical resistance
- Excellent physical properties
- Exceptional heat resistance
- Low outgassing

Semiconductor Applications

- ✓ Exhaust & Abatement
- ✓ Forelines
- ✓ Wet Etching
- ✓ Chemical Vapor Depositions
- ✓ Stripping
- ✓ Diffusion & RTP
- ✓ Resist removal
- ✓ Valve Seals
- ✓ KF Fitting Seals

Chemical Applications:

- ✓ Organic/Inorganic Acids
- ✓ Bases
- ✓ Amines
- ✓ Steam or Hot Water
- ✓ Ketones
- ✓ Aldehydes

Typical Physical Properties¹

Color ²	Black
Hardness, (Shore A)	78 (+/-5)
Elongation at break ³ , %	165
Tensile Strength, psi(MPa)	1920 (13.24)
Modulus @100%, psi(MPa)	813 (5.6)
Specific Gravity (g/cm ³)	2.01
Min. Operating Temperature, °C(°F)	-10 (14)
Max. Operating Temperature, °C(°F)	260 (500)

¹Not to be used for specification purposes

²Color variations may be observed in actual product. They are considered to be cosmetic and inherent as a result of curing process, not indicative for foreign matter and is not expected to have an adverse effect on the performance of the part in service.

³Even though elongation property is indicated, most perfluoroelastomer materials should not be stretched for optimal performance.

⁴ASTM D395-03, Method B

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ICP-MS Ash Test Data Comparison

PERFREZ PXC scores excellent result on metal content versus other black FFKM compounds in the market without compromising the chemical compatibility.

Elements	DL	Unit	PXC	Competitor W2	Competitor K6
Aluminum (Al)	1	ppb (ng/g)	7900	29000	9700
Barium (Ba)	1	ppb (ng/g)	11	250	55
Beryllium (Be)	10	ppb (ng/g)	*	*	*
Bismuth (Bi)	10	ppb (ng/g)	*	*	*
Cadmium (Cd)	1	ppb (ng/g)	*	*	*
Calcium (Ca)	10	ppb (ng/g)	290	4000	3900
Cesium (Cs)	1	ppb (ng/g)	*	*	*
Chromium (Cr)	5	ppb (ng/g)	62	290	1000
Cobalt (Co)	1	ppb (ng/g)	17	7	9
Copper (Cu)	5	ppb (ng/g)	13	84	320
Gallium (Ga)	1	ppb (ng/g)	9	53	5
Indium (In)	1	ppb (ng/g)	63	46	6
Iron (Fe)	10	ppb (ng/g)	470	4800	2900
Lead (Pb)	1	ppb (ng/g)	2	36	28
Lithium (Li)	1	ppb (ng/g)	*	7	4
Magnesium (Mg)	1	ppb (ng/g)	25	1700	12000
Manganese (Mn)	1	ppb (ng/g)	7	98	53
Molybdenum (Mo)	5	ppb (ng/g)	*	*	*
Nickel (Ni)	1	ppb (ng/g)	87	71	67
Potassium (K)	10	ppb (ng/g)	210	13000	1800
Rubidium (Rb)	1	ppb (ng/g)	*	15	4
Silver (Ag)	10	ppb (ng/g)	*	10	40
Sodium (Na)	5	ppb (ng/g)	17000	28000	20000
Strontium (Sr)	1	ppb (ng/g)	*	29	21
Thorium (Th)	10	ppb (ng/g)	*	*	*
Tin (Sn)	10	ppb (ng/g)	*	140	290
Titanium (Ti)	10	ppb (ng/g)	40	150	3500
Vanadium (V)	1	ppb (ng/g)	*	31	2
Zinc (Zn)	10	ppb (ng/g)	50	150	230
Zirconium (Zr)	10	ppb (ng/g)	*	530	520

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