



Garlast® Perfluoroelastomer Grades

Grade	Characteristics	Hardness	Operating temperature	Color
1075	Wide range of corrosion resistance	75	- 15°C ~ 230°C	Black
1065		65		
1090		90		
2075	Excellent high temperature resistance	75	- 15°C ~ 316°C	Black
2090		90		
2175		75		
3075	Resistant to high temperature superheated water and water vapor	75	- 15°C ~ 300°C	Black
3090		90		
7080	Highest temperature resistance	80	- 15°C ~ 325°C	Black
7092		90		
4075	FDA compliant	75	- 15°C ~ 230°C	White
6378	Wide range of corrosion resistance	76	- 15°C ~ 275°C	Black
6091	EDR (explosion-decompression resistant)	90	- 15°C ~ 230°C	Black
5080	Resistant to strong oxidation media (halogens, thermo-oxidizing acids)	79	- 20°C ~ 230°C	Creamy yellow
6075	High temperature amine resistance (>70°C)	75	- 15°C ~ 230°C	Black
9075	Resistant to low temperatures	75	- 42°C ~ 230°C	Black
1095	Explosion relief (ED)	95	- 15°C ~ 230°C	Black



Garlast® FFKM Grades - Chemical Compatibility and Physical Properties

Chemical Environment	Garlast® 1075	Garlast® 2075	Garlast® 3075	Garlast® 4075	Garlast® 6075	Garlast® 6378	Garlast® 6091	Garlast® 7080	Garlast® 7092	Garlast® 9075
	General purpose — broad chemical resistance	High temperature to 316 °C	Superheated water & steam to 300 °C	FDA-compliant, white	High-temperature amine resistance	Broad chemical resistance to 275 °C	EDR — explosion-decompression resistant	Highest temperature — 325 °C	Highest temperature, 90 Shore A	Low-temperature service to -42 °C
Aromatic / aliphatic hydrocarbons	E	E	E	E	E	E	E	E	E	E
Acids	E	E	G	E	E	E	E	E	E	E
Inorganic bases (alkalis)	G	G	G	G	G	G	G	G	G	G
Alcohols	E	E	E	E	E	E	E	E	E	E
Aldehydes	E	G	E	E	E	E	E	E	E	E
Amines	F	P	F	F	E	P	E	F	F	F
Ethers	E	E	E	E	E	E	E	E	E	E
Esters	E	E	E	E	E	E	E	E	E	E
Ketones	E	E	E	E	E	E	E	E	E	E
Water / steam	G	P	E	G	G	E	G	F	F	G
Strong oxidants	F	F	F	F	F	F	F	F	F	F
Ethylene oxide / propylene oxide	E	N/A	E	E	E	E	E	G	G	E
Dry heat (hot air)	F	E	G	F	F	G	F	E	E	F
Solvents (general)	E	E	E	E	E	E	E	E	E	E
High-pressure / extrusion resistance	F	F	F	F	F	F	G	F	G	F
RGD (rapid gas decompression)	P	P	P	P	P	P	E	P	P	P

E: Excellent (++++), G: Good (+++), F: Fair (++) , P: Poor (+) , N/A: Not applicable (x)

Typical physical properties ¹	Garlast® 1075	Garlast® 2075	Garlast® 3075	Garlast® 4075	Garlast® 6075	Garlast® 6378	Garlast® 6091	Garlast® 7080	Garlast® 7092	Garlast® 9075
Maximum service temperature, °C (°F)	230 (446)	316 (601)	300 (572)	230 (446)	230 (446)	275 (527)	230 (446)	325 (617)	325 (617)	230 (446)
Minimum service temperature, °C (°F)	-15 (5)	-15 (5)	-15 (5)	-15 (5)	-15 (5)	-15 (5)	-15 (5)	-15 (5)	-15 (5)	-42 (-44)
Color	Black	Black	Black	White	Black	Black	Black	Black	Black	Black
Hardness, Shore A ¹	76	74	76	73	75	76	90	80	90	75
100% modulus, MPa ²	15.0	9.3	12.5	7.4	6.3	11.6	18.4	12.5	12.5	4.3
Tensile strength at break, MPa ²	22.1	14.7	16.4	13.8	21.4	15.8	20.1	17.0	17.0	16.7
Elongation at break, % ²	139	177	144	175	194	129	118	153	153	257
Compression set ³ , 70 h at 204 °C, %	23	19	25	22	19	15	26	14	14	30

¹ Hardness — ASTM D2240. ² Modulus, tensile strength, elongation — ASTM D412, 500 mm/min. ³ Compression set — ASTM D395B, 214 O-ring. ⁴ Chemical ratings: ++++ Excellent · +++ Good · ++ Fair · + Poor · × N/A.



Garlast® Brand Comparison

Garlast® perfluoroelastomer (FFKM) grades are engineered to meet the same demanding requirements as leading industry brands, including broad chemical resistance, high-temperature service, and reliable sealing in critical applications. In Garlast internal testing, several grades match or exceed comparable reference compounds in specific areas – such as superheated water and steam, hot-air aging, amine exposure, ethylene oxide/propylene oxide, and extreme service temperatures – while offering a consistent supply and application support from Garlast Seal Company. **Grade selection should always be based on your operating conditions, media, and hardware. Garlast technical support can help you identify the most suitable compound and confirm performance for your application.**

For example, the following grades show measurable advantages over the comparable Kalrez® reference grade in Garlast internal testing.

Garlast® Grade	Kalrez® Grade	Primary Advantage	Garlast Rating	Application Notes
1075	2035	Ethylene oxide / propylene oxide	Excellent	Kalrez® 2035 rated not applicable (×) for EtO/PO; Garlast® 1075 rated Excellent
2075	4079	Hot air	Excellent	Superior hot-air aging at 316 °C continuous service
3075	7375	Superheated water & steam	Excellent	Steam and hot-water resistance for 300 °C service
6075	1050LF	Amines	Excellent	High-temperature amine environments (>70 °C)
6378	6375	Superheated water & steam	Excellent	Extended chemical envelope to 275 °C with improved steam resistance
7080	7075	Hot air; maximum service temperature	Excellent / 325 °C	Highest continuous-use temperature in the Garlast® line
7092	7090	Hot air; maximum service temperature	Excellent / 325 °C	High-hardness (90 Shore A) grade for extreme temperature sealing
9075	0040	Minimum service temperature	Excellent / -42 °C	Lowest minimum operating temperature vs comparable Kalrez® grade (-15 °C)