

MARKEZ® Z1407 a perfluoroelastomer material developed for applications such as plasma, wet wafer processing, laser and medical applications where high performance and purity are critical. This compound is formulated with nanoparticles of PTFE which act as an ultrapure organic filler.

ABOUT MARKEZ® #Z1407

MARKEZ® Z1407 is a top of the line material designed to perform in semiconductor applications and abrasive chemical environments.

It is commonly used in Semiconductor fields, the Chemical Industry, and Medical & Laser applications.

APPLICATION EXAMPLES

- Excellent chemical resistance
- Extremely low extractables
- Good plasma resistance
- Good high temperature resistance

Used in semiconductor, including:

- Deposition: LPCVD, CVD, APCVD, HDPCVD, PECVD, RPCVD, SACVD
- Plasma etch: oxide and metal
- RTP, Oxidation, Diffusion, Lamp Anneal

APPLICATION EXAMPLES

- Semiconductor
 - Deposition, Plasma etch, Ashing, RTP, Sputtering, Ion Implant.
- Metalization: PVD, evaporation

ADDITIONAL INFORMATION

- Service Temperature of 5° to 536°F
- Spec: ASTM

This information is accurate and reliable to the best of our knowledge. However, Marco Rubber makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It is the customer's responsibility to evaluate parts prior to use.

PHYSICAL PROPERTIES

ORIGINAL PROPERTIES	ASTM Method	Typical Test Results
Color		Clear Amber
Material Type	FFKM	Perfluoroelastomer
Hardness: (°IRHD)	D1415	
Hardness, Shore A	D2240	72
Tensile Strength MPa (psi)	D412	17.35 (2500)
Modulus @ 100%, MPa (psi)	D412	4.7 (682)
Elongation at Break	D412	2.3
Compression Set, 72 hrs. @ 200°C (392°F)	D395	0.19
Minimum Operating Temperature		-15°C (5°F)
Maximum Operating Temperature		280°C (536°F)
Specific Gravity		2.05
RADIATION RESISTANCE	Test Conditions	Typical Test Results
Tensile Strength Change, %	1 MRad @ 23°C	0
Modulus @ 100% Change, %	1 MRad @ 23°C	0
Elongation at Break Change, %	1 MRad @ 23°C	-2
Hardness Change, points	1 MRad @ 23°C	2
RADIATION RESISTANCE	Test Conditions	Typical Test Results
Tensile Strength Change, %	10 MRad @ 23°C	-24
Modulus @ 100% Change, %	10 MRad @ 23°C	13
Elongation at Break Change, %	10 MRad @ 23°C	-15
Hardness Change, points	10 MRad @ 23°C	5
RADIATION RESISTANCE	Test Conditions	Typical Test Results
Tensile Strength Change, %	100 MRad @ 23°C	-86
Modulus @ 100% Change, %	100 MRad @ 23°C	-
Elongation at Break Change, %	100 MRad @ 23°C	-91
Hardness Change, points	100 MRad @ 23°C	20