

VALQUA Semiconductor Industry Products

ARCURY® SERIES

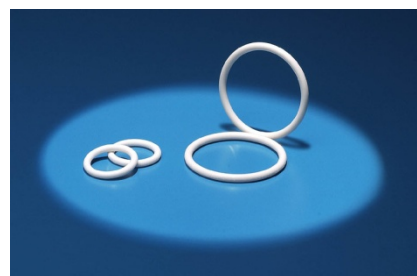
High Performance FKM Elastomer for Wet Processes



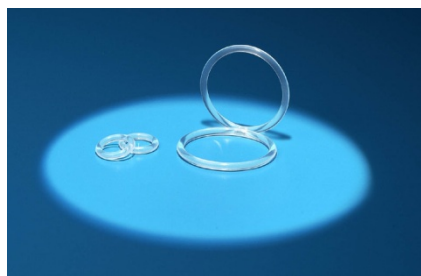
ARCURY® AD



ARCURY® AL



ARCURY® SO



ARCURY® OZT



ARCURY® OZW

❖ About the ARCURY® Series

The ARCURY® SERIES is Valqua's high performance FKM materials suited for wet applications. Our materials present a wide range of options for applications requiring chemical resistance and high purity (see chemical compatibility on other side).

❖ Features & Properties

Name	ARCURY® AD	ARCURY® AL	ARCURY® SO	ARCURY® OZT	ARCURY® OZW
Feature	Acid Resistance with high purity (low extraction of metals and organics)	Resistance to alkali solvents including ammonia	Excellent resistance against polar organic solvents including ketone, ester, and amine	Ozone gas and Ozone water resistance. Excellent purity (low metal and organic extraction)	Excellent resistance to ozone gas and ozone water, with high heat resistance.
Color	Transparent Amber	Black	White	Transparent Clear	White
Hardness (Shore A)	67	75	73	60	68
Tensile Strength (MPa)	12.0	23.8	9.4	17.0	13.0
Elongation (%)	190	220	185	580	230
100% Modulus (MPa)	3.3	7.5	4.6	1.7	3.4
Compression Set (%)	25 ¹⁾	31 ¹⁾	16 ²⁾	48 ²⁾	37 ¹⁾
Applications	1. Wafer and glass substrate cleaner 2. Spin coater, spin developer 3. Chemical carrier tank seal 4. Seals for valves, filters, and joints			1. Ozone cleaner 2. Ozone generator 3. Ozone decomposition machine	

¹⁾ 25% compression, 200C x 72h, AS568-214 O-ring

²⁾ 25% compression, 150C x 72h, AS568-214 O-ring

Values above are actual measurements, not standards

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Chemical Compatibility

❖ ARCURY® AD

Chemical	Conditions	Volume Swell
Ultra pure water	80C, 30 days	0
Fluoric acid	25C, 30 days	0
HCl (36wt%):H ₂ O ₂ (30wt%):H ₂ O = 1:1:5	80C, 168 hours	< 5%
H ₂ SO ₄ (98wt%):H ₂ O ₂ (30wt%) = 4:1	80C, 168 hours	< 5%
HF (50wt%):H ₂ O ₂ (30wt%):H ₂ O = 1:1:100	23C, 168 hours	< 5%
HF (50wt%):H ₂ O = 1:100	80C, 168 hours	< 5%
HF (47wt%):NH ₄ F (40wt%) = 1:6	23C, 168 hours	< 5%
H ₃ PO ₄ (85wt%)	80C, 168 hours	< 5%

❖ ARCURY® AL

Chemical	Conditions	Result	
		ARCURY®-AL	General FKM
NMP	80C, 168 hours	5.7%	300%
Ammonium Water (30%)	40C, 168 hours	1.6%	181%
Methyl Ethyl Ketone	R.T., 168 hours	>50%	>50%
Methanol	R.T., 168 hours	<5%	>50%
Ethyl Acetate	R.T., 168 hours	>50%	>50%
Di-n-Butyl Ether	R.T., 168 hours	20~50%	<5%
Sodium Hydroxide (50%)	40C, 168 hours	<5%	<5%
Hydrochloric Acid (35%)	40C, 168 hours	<5%	5~20%
Sulfuric Acid (97%)	40C, 168 hours	<5%	<5%
Nitric Acid (65%)	40C, 168 hours	<5%	20~50%
Acetic Acid	40C, 168 hours	20~50%	>50%
Fluoric Acid (46%)	40C, 168 hours	<5%	<5%
Hydrogen Peroxide (31%)	R.T., 168 hours	<5%	<5%

❖ ARCURY® SO

Chemical	Conditions	Result	
		ARCURY®-SO	General FKM
Methyl Ethyl Ketone	R.T., 168 hours	15.8%	266%
Ethyl Acetate	R.T., 168 hours	17.7%	248%
Mono Ethanol Amine	80C, 168 hours	3%	(dissolution)
Methanol	R.T., 168 hours	<5%	>50%
Di-n-Buthyl Ether	R.T., 168 hours	>50%	<5%
Ammonia Water (30%)	40C, 168 hours	<5%	>50%
Sodium Hydroxide (50%)	40C, 168 hours	<5%	<5%
Hydrochloric Acid (35%)	40C, 168 hours	<5%	5~20%
Nitric Acid (65%)	40C, 168 hours	5~20%	20~50%
Acetic Acid	40C, 168 hours	5~20%	>50%
Fluoric Acid (46%)	40C, 168 hours	5~20%	<5%
Hydrogen Peroxide (31%)	R.T., 168 hours	<5%	<5%
NMP	80C, 168 hours	5~20%	>50%

❖ Contact Us

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