

Katon[®]



KATON[®] PF80V

High Performance Specfluoroelastomer

KATON® PF80V Series specfluoroelastomer

What is KATON® PF80V O-RING ?

- Application of KATON® peroxide macromolecular polymer.
- Resistance to almost all chemicals in touch panel manufacturing process.
- No roller mark formation on glass during manufacturing process.
- Zero metal release without contaminating chemical liquid.

“Amine resistance” (N-butylamine soaking comparison)



“Structure”

Novel terpolymer composition with APA bridging system based on unparalleled KATON® formulation.



“Formulations available for diverse manufacturing processes”

- KATON® PF80V-W series
For water cleaning process (low cost) in glass panel production.
- KATON® PF80V series
For liquids of all wet chemical processes in glass panel production.

“Features”

	KATON® PF80V	FKM
No roller marks	○	×
TUJ WN (Dry Etch) Organic solvent mixture	○	×
Acid mixture	○	△
Polar basic amine	○	×
Etchant mixture	○	×

○ : Excellent △ : Fair × : No good

KATON® PF80V can resist the attack of highly saturated vapor effortlessly, unattainable by most fluoroelastomers.



“Product List”

Product Name

KATON® PF80V

Distinctive Features

80 Shore A (Peroxide curing)
 Roller applications for wet inline tools
 Wet chemical management systems
 MOCVD and other select dry processes

Performance before vulcanization (Press cure 175°C , 30min)

Appearance

White compound

Performance following vulcanization (Press cure 200°C , 4hr)

Specific gravity 23°C (ASTM D792)	1.99
Hardness Shore A (ASTM D2240)	80
Rebound resilience (ASTM D297)	26.15
Elongation length% (ASTM D412)	155
Tear strength Mpa (ASTM D624)	15
Compression deformation%, 200°C,70hr (Button) (ASTM D395)	22

“Low-temperature wet penetration (ASTM D417”

FFKM

KATON® PF80V

FKM

Permeability tyg/m ² . 24hr	5	4	10
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“Volume changes in various solvents”

Product Name

KATON® PF80V

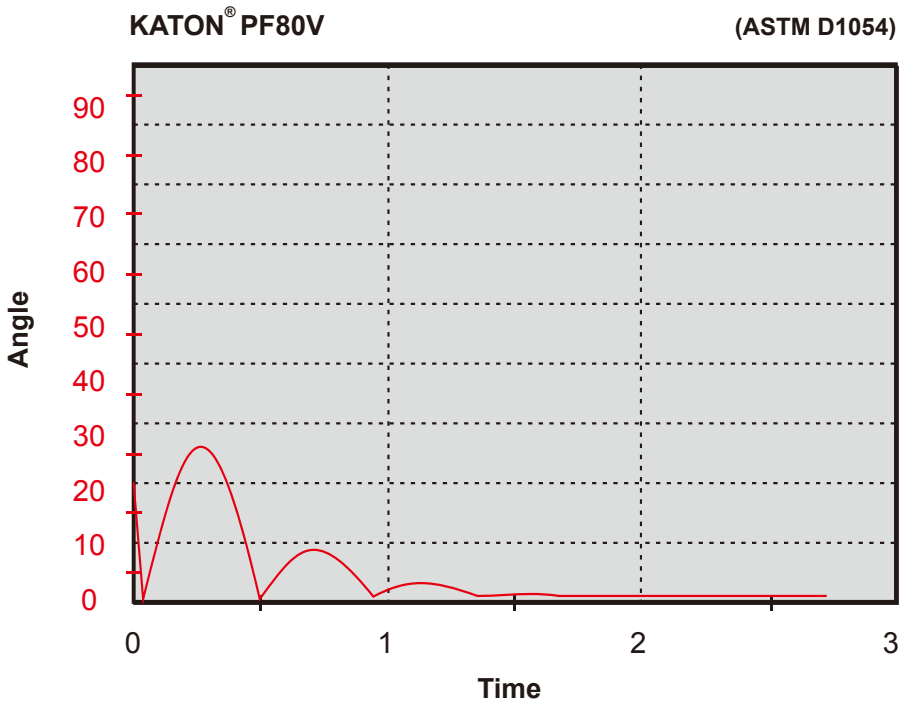
Volume change%, 25oC-70hr

Specific gravity change%

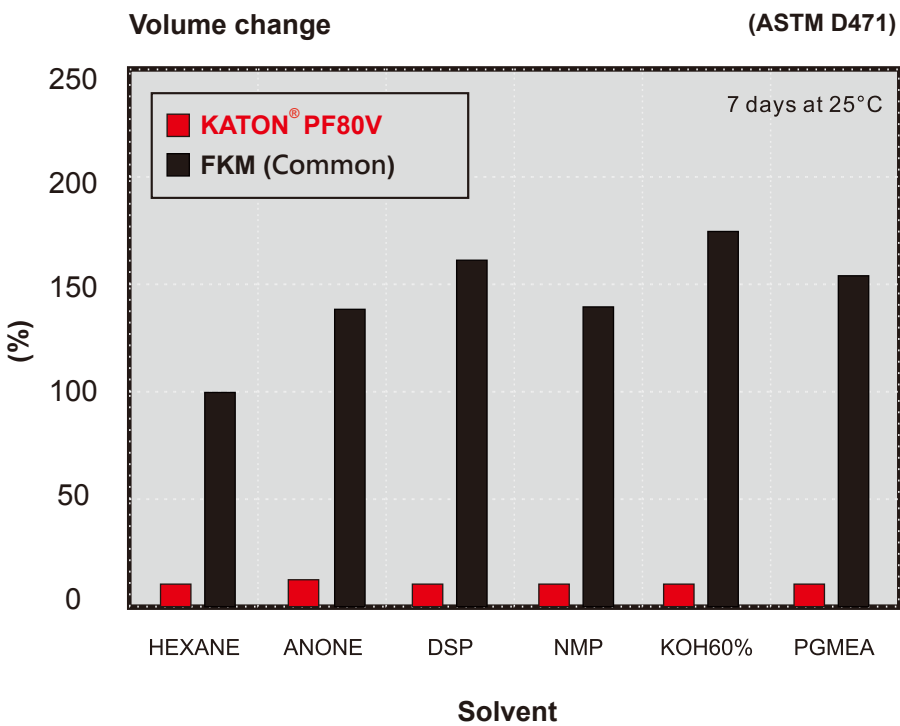
Product Name	Solvent	Volume change%, 25oC-70hr	Specific gravity change%
Hydrocarbon	ISOPAH propulsion gas	0	0
	Fuel C	14	-7
	Hexane	11	-5
	Toluene	0	0
	DI Water	0	0
Photo Resiston	1500 mixture solution	6	-2
Ketone	Acetone	7	-9
	MEK	5	0
Ester	Ethyl acetate	7	-3
Alcohol	Allyl Alcohol	0	0
	Ethylene glycol	0	0
Ether	Methyl tert-butylether	0	0
	DGME	1	-2
Amine	DMAC	3	-2
	Butylamine	10	-8
	TMAH2.38% tetramethylammonium hydroxide	1	-1
Aldehyde	Formalin	0	0

“Unique characteristics”

Rebound resilience

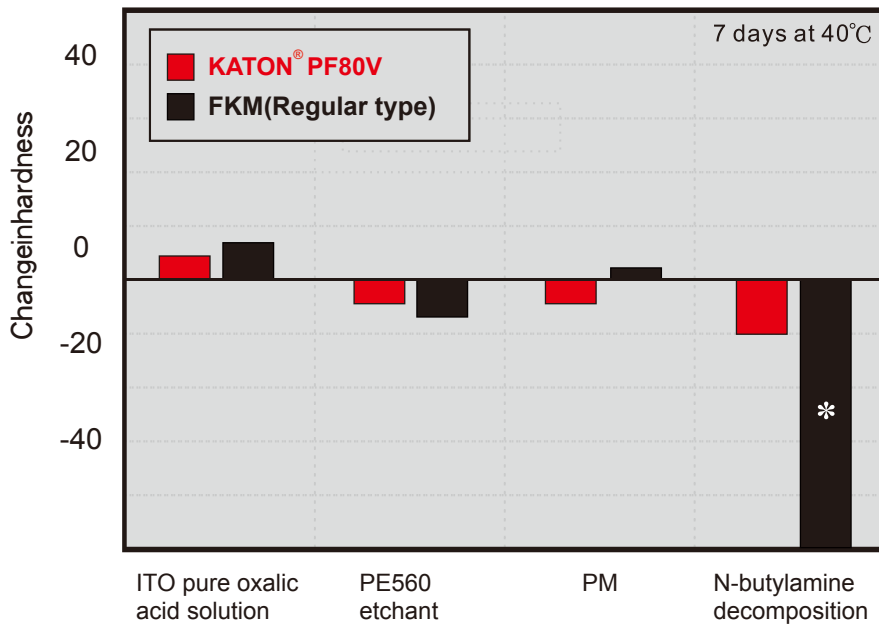


Solvent resistance performance

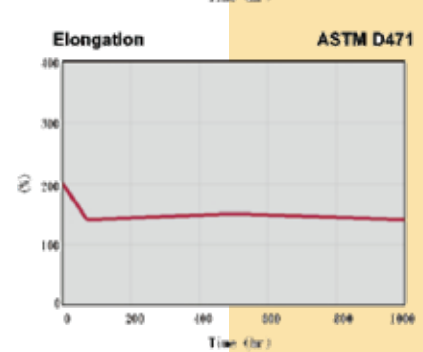
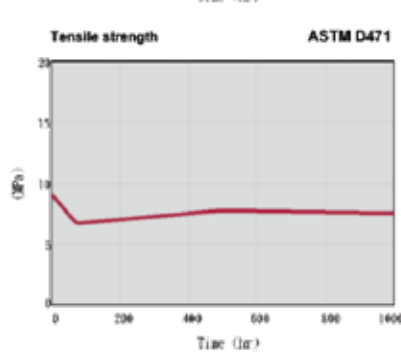
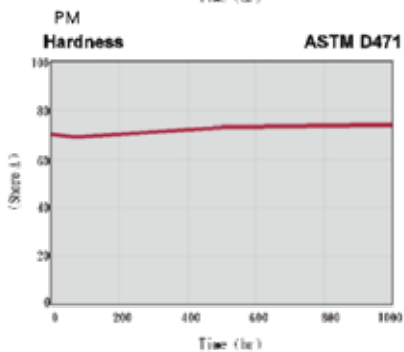
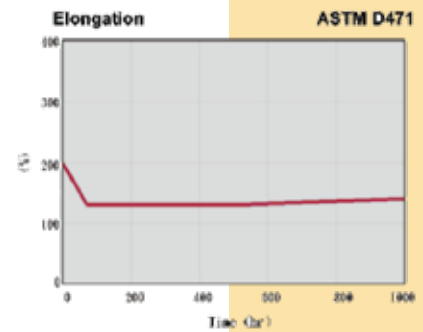
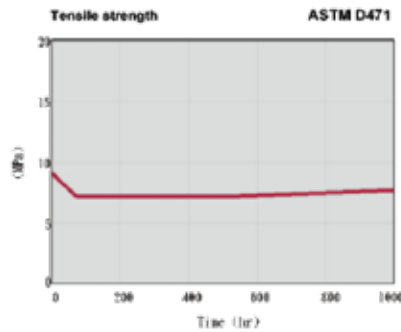
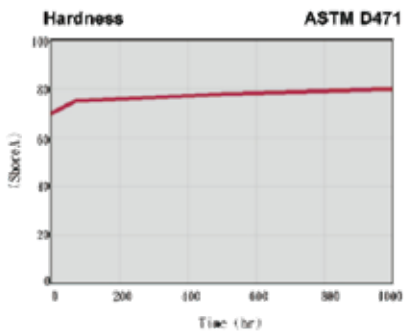
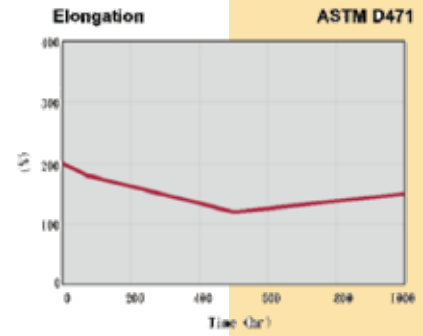
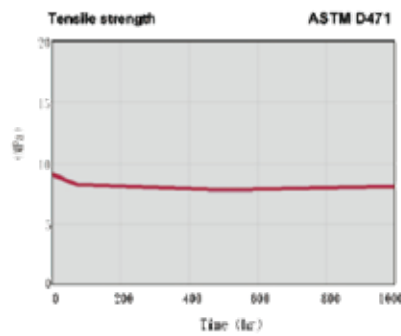
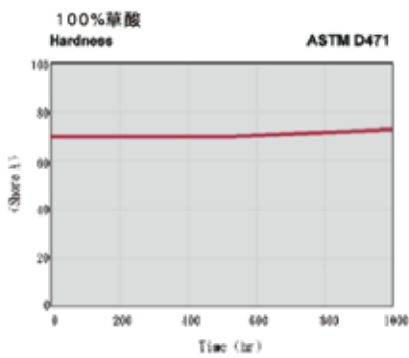


Specific gravity change percentage

Specific gravity change percentage (ASTM D471)



Etchant mixture

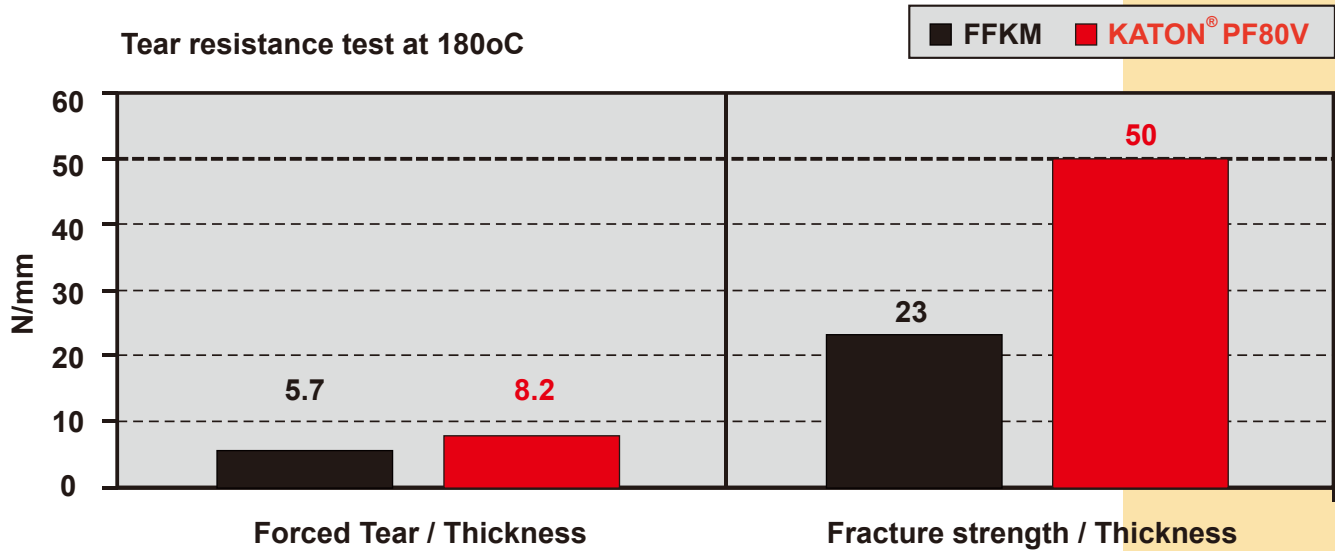


KATON® PF80V's effect on tear performance in dynamic roller usage

KATON® PF80V & FFKM, comparison result of tear strength at elevated temperature

Test temperature : 180°C

Test standard : ASTM D624B

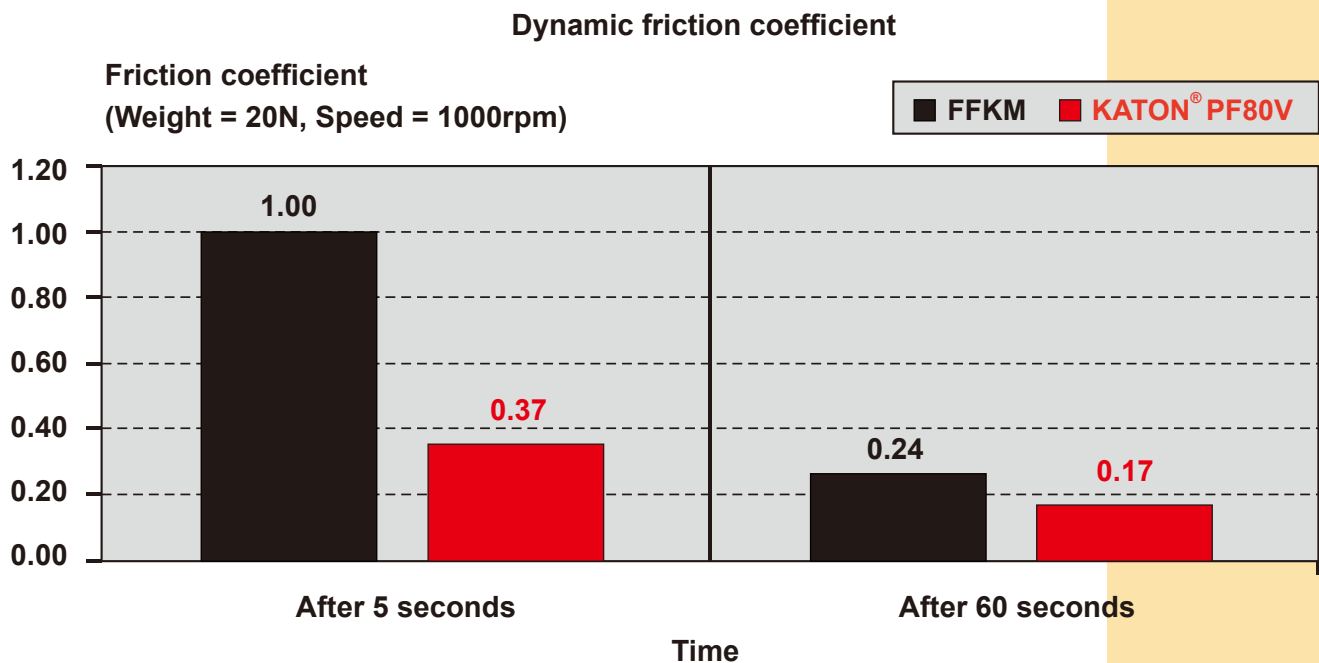


KATON® PF80V's effect on dynamic friction coefficient in touch panel manufacturing

KATON® PF80V 80A

Pressure: 0.17 MPa 100 mm stainless steel rod

Rotational speed: 1000rpm



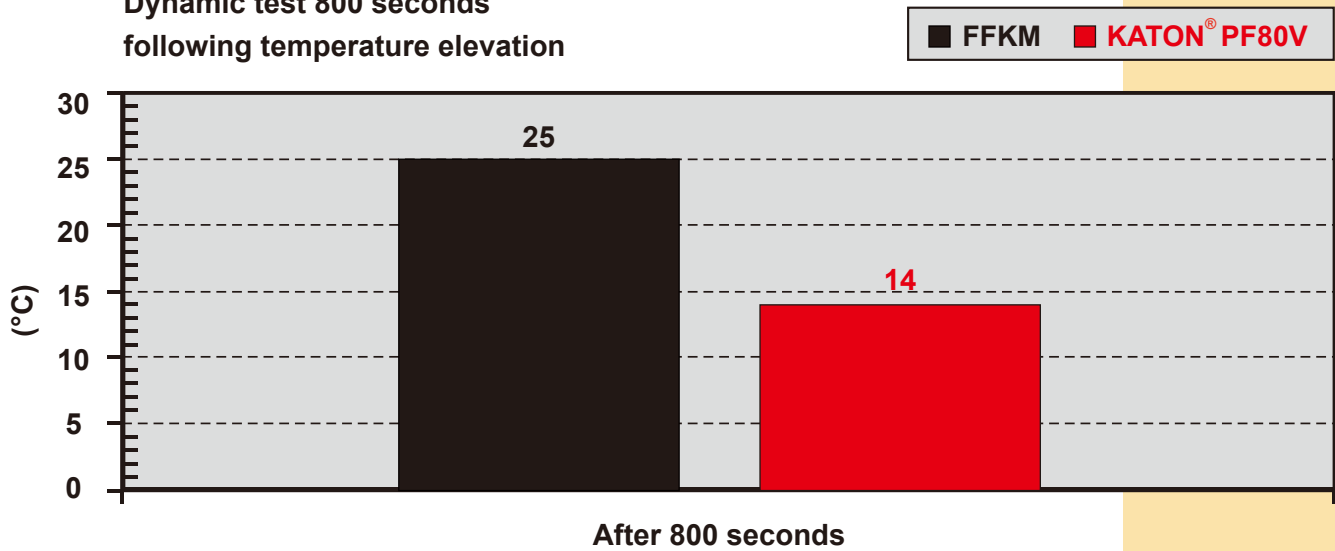
KATON® PF80V's effect on friction coefficient of touch sensor glass

KATON® PF80V 80A

Pressure: 0.17 MPa 100 mm stainless steel rod

Rotational speed: 1000rpm

Dynamic test 800 seconds following temperature elevation

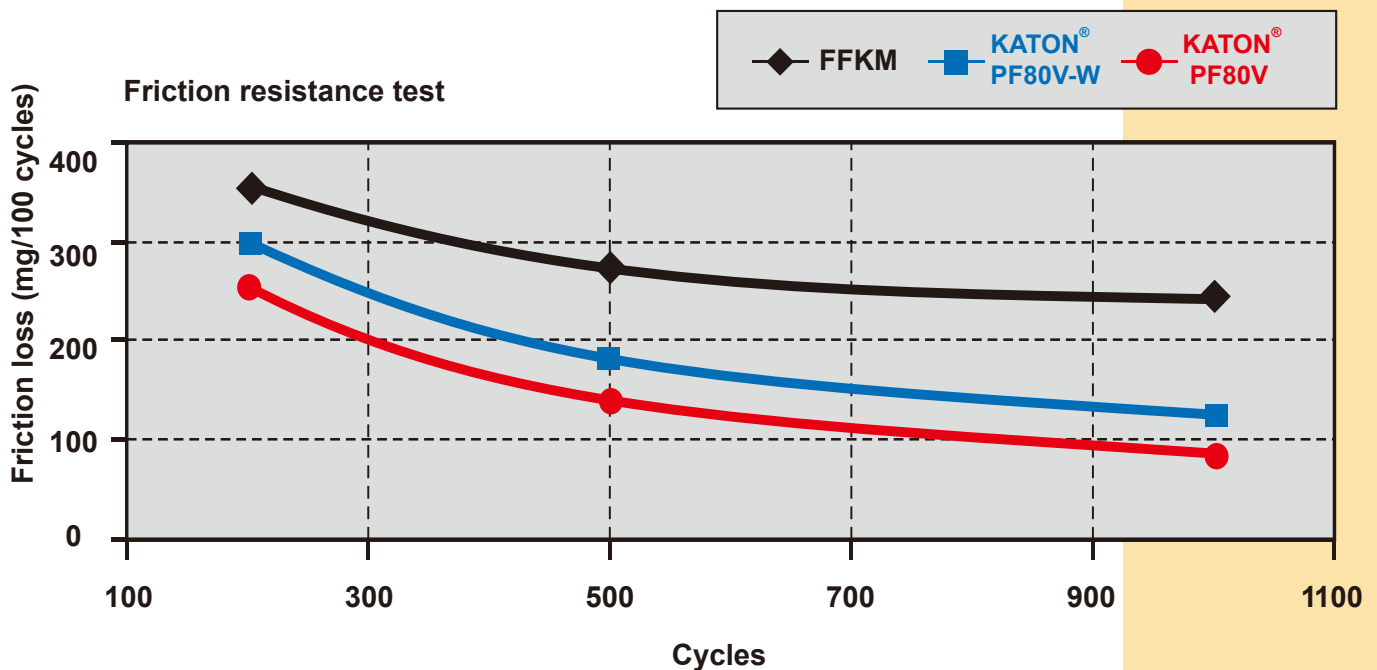


KATON® PF80V's effect on friction loss of O-Ring (P-38)

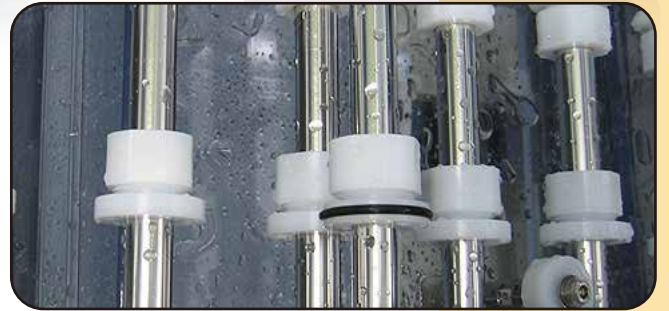
KATON® PF80V 80A

Pressure: 0.17 MPa 100 mm stainless steel rod

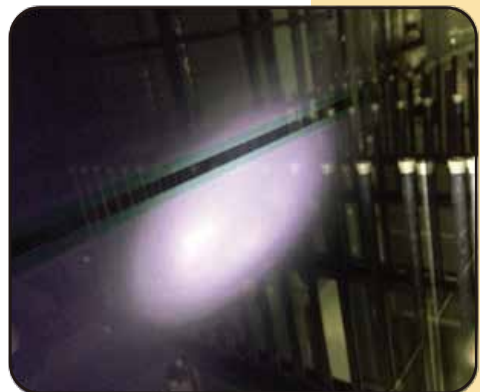
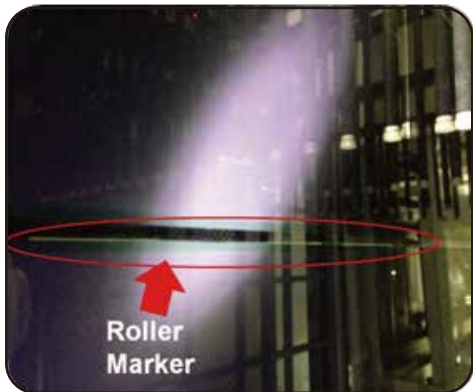
Rotational speed: 1000rpm



ITO wet cleaning process and etching equipment usage



ITO wet cleaning process and etching equipment usage



Before improvement: Yield is affected by Roller Marke. After improvement: Yield is improved efficiently.

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