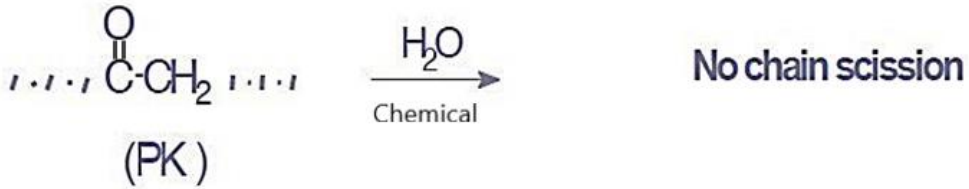


Chemical resistance of PK

PK has excellent chemical resistance due to the following chemical structure. This is because the C-C bond is not broken by moisture and chemical attack.

PK structure



I. Chemical resistance remark standard

The chemical resistance remark was written according to the following standard. For example, if the weight change is the best and the tensile strength retention is the best, the best remark is obtained. However, if either the weight change or the tensile strength retention rate has a low remark, it will have a low remark.

Standard		
Weight change	Tensile strength change	Remark
0~1%	0~5%	Excellent
1~3%	5~10%	Good
3~5%	10~20%	Not bad
over 5%	over 20%	Not recommended

II. Chemical resistance of PK by Hyosung chemical

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Remark
1	Antifreeze	100	23	25	Excellent
		100	80	25	Excellent
2	Ammonium Chloride	50 ppm	23	28	Good
		50 ppm	40	28	Good
3	Calcium Chloride	5	80	25	Good
4	Cement mortar	100	23	28	Excellent
5	Chloramines	1.63	70	28	Excellent
6	Ethanol	40	23	56	Good
7	Gasoline (15% Me OH)	100	23	40	Good
		100	65	40	Good
8	Hydrochloric Acid	1	80	25	Good
		5	80	25	Good
		10	80	25	Good
9	Hypochlorous acid	50 ppm	23	28	Good
		50 ppm	40	28	Good

Chemical resistance of PK

II. Chemical resistance of PK by Hyosung chemical

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
10	Isododecane	100	55	56	Excellent
11	Magnesium chloride	10	23	25	Not bad
12	Polydimethylsiloxane	100	55	56	Excellent
13	Potassium Hydroxide	47	23	63	Excellent
14	Seawater	100	80	25	Good
15	Sodium Chloride	10	23	25	Good
16	Sodium Hydroxide	1	80	25	Good
17	Vaseline	100	55	56	Excellent
18	Water	100	23	28	Good
		100	55	56	Good
		100	95	28	Excellent
19	Zinc Chloride	50	80	25	Good

III. Chemical resistance of PK by Shell

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
1	Acetic Acid	5	23	100	Good
		5	23	365	Good
		5	23	730	Good
		5	23	1095	Good
		5	80	25	Good
		5	80	100	Good
		5	80	300	Good
2	Acetone	100	23	100	Not bad
		100	23	365	Not bad
		100	23	730	Not recommended
		100	50	100	Not bad
		100	50	300	Not bad
3	Ammonium Hydroxide	10	23	100	Excellent
		10	23	365	Not bad
		10	80	25	Not bad
4	Ammonium Sulfate	20	23	100	Good
		20	23	365	Good
		20	23	730	Good

Chemical resistance of PK

III. Chemical resistance of PK by Shell

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
5	Aniline	100	23	100	Not recommended
		100	23	365	Not recommended
6	Anisole	100	23	100	Not bad
		100	23	365	Not recommended
		100	23	730	Not recommended
7	Antifreeze	100	23	100	Excellent
		100	23	365	Excellent
		100	23	730	Excellent
		100	45	100	Excellent
		100	45	300	Good
		100	80	25	Not bad
		50	23	763	Excellent
		50	45	100	Excellent
8	Barium Hydroxide	10	23	100	Good
		10	23	365	Good
		10	23	730	Good
9	Beer	100	23	100	Good
		100	23	365	Good
10	Benzaldehyde	100	23	100	Good
		100	23	365	Not recommended
		100	23	730	Not recommended
11	Brake Fluid	100	23	763	Excellent
		100	45	100	Good
		100	45	360	Good
12	n-Butanol	100	23	100	Good
		100	23	365	Good
		100	23	730	Good
13	Butylacetate	100	23	365	Excellent
		100	80	365	Good
14	Calcium Chloride	5	23	100	Good
		5	23	365	Good
		5	23	730	Good
		5	80	100	Not bad
		10	23	25	Good
		30	23	320	Good
15	Calcium Hydroxide	2	23	100	Good
		2	23	365	Good
16	Carbon Tetrachloride	100	23	100	Excellent
		100	23	365	Excellent
17	Chassis Lube	100	23	763	Excellent
		100	45	100	Good
		100	45	360	Good

Chemical resistance of PK

III. Chemical resistance of PK by Shell

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
18	Chloroform	100	23	100	Not recommended
		100	23	365	Not recommended
		100	23	730	Not recommended
		100	80	25	Not recommended
		100	80	100	Not recommended
19	Cupric Chloride	20	23	100	Good
		20	23	365	Good
		20	23	730	Good
20	Detergent, Tide	5	23	100	Good
		5	23	365	Good
21	Dichlorobenzene 1,2	100	23	100	Good
		100	23	365	Good
22	Dimethyl Formamide	100	23	100	Not recommended
		100	23	365	Not recommended
		100	23	730	Not recommended
		100	80	100	Not recommended
		100	80	300	Not recommended
23	Dishwash, cascade	5	23	100	Good
		5	23	365	Good
		5	23	730	Good
24	Dimethyl Sulfoxide	100	23	100	Not bad
		100	23	365	Not recommended
		100	23	730	Not recommended
		100	80	25	Not recommended
25	Ethanol	100	23	100	Excellent
		100	23	365	Good
		100	23	730	Good
		100	80	25	Not bad
		100	80	100	Not bad
26	Ethyl Acetate	100	23	100	Excellent
		100	23	365	Good
		100	23	730	Not bad
		100	80	25	Not bad
		100	80	100	Not bad
27	Ethylene Glycol	100	23	763	Excellent
		100	80	25	Not bad
		100	80	100	Not bad
28	Ferrous Sulfate	20	23	100	Good
		20	23	365	Good
		20	23	730	Good
29	Formic Acid	10	23	100	Not bad
		10	23	365	Not bad
		10	23	730	Not bad

Chemical resistance of PK

III. Chemical resistance of PK by Shell

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
30	Gasoline	100	23	100	Excellent
		100	23	365	Excellent
		100	23	730	Excellent
		100	45	100	Excellent
		100	45	360	Excellent
		100	80	25	Good
		100	80	100	Good
31	Gasoline (10% EtOH)	100	23	763	Good
		100	45	100	Good
		100	45	300	Good
32	Gasoline (15% Me OH)	100	95	40	Not bad
33	Gasoline (15% MTBE)	100	95	40	Good
34	Heptane	100	23	100	Excellent
		100	23	300	Excellent
		100	80	100	Not bad
		100	80	300	Not bad
35	Hexane	100	23	100	Excellent
		100	23	365	Excellent
		100	23	730	Excellent
36	Hydrochloric Acid	1	23	100	Good
		1	23	365	Good
		1	80	100	Good
		10	23	100	Good
		10	23	365	Not recommended
		10	80	100	Not recommended
		37	23	100	Not recommended
37	23	365	Not recommended		
37	Hydrogen Peroxide	3	23	100	Good
		3	23	365	Good
		3	80	25	Good
		3	80	100	Not bad
		35	23	365	Not bad
38	Isopropyl Alcohol	100	23	100	Excellent
		100	23	365	Excellent
		100	23	730	Excellent
39	Ketchup	100	23	365	Good
40	Lactic Acid	20	23	100	Good
		20	23	365	Not bad
		20	23	730	Not bad
41	Liquor, Tequila	100	23	100	Not bad
		100	23	365	Not bad

Chemical resistance of PK

III. Chemical resistance of PK by Shell

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
42	Methanol	100	23	100	Not bad
		100	23	365	Not bad
		100	23	730	Not bad
		100	23	1095	Not bad
		100	80	25	Not bad
43	Methyl Ethyl Ketone	100	23	100	Good
		100	23	365	Not bad
		100	23	730	Not bad
		100	23	1095	Not bad
		100	80	25	Not bad
		100	80	100	Not bad
44	Methylene Chloride	100	23	100	Not recommended
		100	23	365	Not recommended
		100	80	25	Not recommended
		100	80	100	Not recommended
45	N-Methyl Pyrrolidone	100	23	100	Good
		100	23	365	Not recommended
		100	23	730	Not recommended
46	Motor Oil	100	23	763	Excellent
		100	45	100	Good
		100	45	300	Not bad
47	MTBE	100	23	100	Excellent
		100	23	365	Excellent
		100	23	730	Excellent
48	Mustard	100	23	365	Good
49	Nitric Acid	1	23	100	Good
		1	60	100	Good
		5	23	100	Good
		5	60	100	Not recommended
		10	23	100	Not recommended
50	Phosphoric Acid	1	23	100	Good
		1	60	100	Good
		5	23	100	Good
		5	60	100	Good
		10	23	100	Good
		10	60	100	Good
		20	23	100	Good
		20	60	100	Good
51	Potassium Hydroxide	45	23	100	Good
		45	23	365	Good
		45	23	730	Good
52	Propylene Carbonate	100	23	100	Good
		100	23	365	Not bad

Chemical resistance of PK

III. Chemical resistance of PK by Shell

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
53	Propylene Glycol	100	80	25	Not bad
		100	80	100	Not bad
54	Seawater	100	23	100	Good
		100	23	365	Good
		100	23	730	Good
		100	80	100	Not bad
55	Skydrol 500	100	45	100	Good
		100	45	300	Not bad
56	Sodium Bisulfite	20	23	100	Not bad
		20	23	365	Not recommended
57	Sodium Hydroxide	1	80	100	Not bad
		10	23	100	Excellent
		10	23	365	Excellent
		10	80	25	Not recommended
		10	80	100	Not recommended
		10	23	730	Excellent
		50	23	100	Good
		50	23	365	Good
58	Sodium Hypochlorite	5	23	100	Not recommended
		5	23	365	Not recommended
59	Sulfuric Acid	5	23	365	Good
		30	23	100	Excellent
		30	23	365	Good
		30	23	730	Not bad
		30	80	25	Good
		30	80	100	Not bad
60	Tetrachloroethylene	100	23	100	Excellent
		100	23	300	Excellent
61	Toluene	100	23	100	Good
		100	23	365	Good
		100	23	730	Good
		100	80	100	Not bad
		100	80	300	Not bad
62	Transmission Fluid	100	23	763	Excellent
		100	45	100	Good
		100	45	360	Good
63	Trichloroethane, 1,1,1	100	23	100	Excellent
		100	23	300	Excellent
		100	80	100	Not bad
		100	80	300	Not bad

Chemical resistance of PK

III. Chemical resistance of PK by Shell

No.	Chemical name	conditions			Result
		Concentration(%)	Temp.(°C)	Time(day)	Mark
64	Trichloroethylene	100	23	100	Not bad
		100	23	365	Not recommended
		100	23	730	Not recommended
		100	80	25	Not recommended
		100	80	100	Not recommended
65	Water	100	23	100	Good
		100	23	365	Good
		100	23	730	Good
		100	80	25	Good
		100	80	100	Not bad
66	Wine, Red	100	23	365	Good
67	Zinc Chloride	10	23	365	Good
		50	23	100	Not recommended
		50	23	365	Not recommended
		50	80	100	Not recommended