

Table for Useful Life of Rubber Flexible Joint



Rubber flexible joints have a life cycle. It is very difficult to calculate uniformly because a product lifetime is influenced by various factors. However, we can surmise useful life of a product under conditions of use in a unique method from our successful record. Our standard useful life of rubber flexible joints is 10 years and you can calculate the useful life with each coefficient according to conditions of use. You can use this for your equipment maintenance plan as a guide.

Coefficient No.	Factor	Coefficient Value					
		TWINFLEX	OFLEX	10-FLEX	FLEXI-DRAIN	LS-CONNECTOR	
1	Coefficient for the product proper structure, material, shape, etc.	Flexible Joint	1.1	1.1	1.1		※1
		Expansion Joint	1.0	1.0	1.0	1.0	※1
2	Coefficient for max operating pressure of liquid.	less than 1.0MPa	1.0	1.0	1.0	1.0	1.0
		over 1.0MPa	0.9	0.9	0.9		1.0
		over 1.37MPa / less than 1.6MPa	0.8	0.8	0.8		0.9
		over 1.6MPa / less than 2.0MPa	0.7				0.8
		over 2.0MPa					0.7
3	Coefficient for max operating temperature of liquid.	less than 40°C	1.0	1.0	1.0	1.0	1.0
		less than 50°C	0.9	0.9	0.9	0.9	0.9
		less than 60°C	0.8	0.8	0.8	0.8	0.8
		less than 70°C	0.7	0.7	0.7		0.7
		less than 80°C					0.5 ※2
4	Coefficient for operating period.	less than 10 hours/day	1.0	1.0	1.0	1.0	1.0
		over 10 hours/day	0.9	0.9	0.9	0.9	0.9
		over 15 hours/day	0.7	0.7	0.7	0.7	0.7
		over 20 hours/day	0.6	0.6	0.6	0.6	0.6
5	Coefficient for repetition of displacement.	No	1.0				
		Yes	0.8				
6	Coefficient for times of pump on/off	less than 10 times/day	1.0	1.0	1.0		1.0
		over 10 times/day	0.8	0.8	0.8		0.8
7	Coefficient for pressure change(max pressure / normal pressure)	less than 1.5 times	1.0	1.0	1.0	1.0	1.0
		over 1.5 times ※2	0.8	0.8	0.8		0.8
8	Coefficient for outdoor exposure.	other than outdoor exposure	1.0				
		outdoor exposure	0.9				
9	Coefficient for displacement rate (operating displacement / allowance)	less than 50%	1.0				
		over 50%	0.8				

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※1 Coefficient No.1 for LS series: 1.2 for standard type, 1.5 for aramid reinforcing fiber.

※2 Max. operating temperature of LS series: Less than 70 deg. C for standard type, Less than 80 deg. C for aramid reinforcing fiber

Useful life of calculation = Standard useful life (10 years) × Coefficient Value 1 ~ 9