Ver. 4.0, October 22nd, 2026

ELTAS™ HPE Series

FFKM PRODUCTS CATALOG

Peroxide Curable FFKM - Base polymer / Pre-compound -

Product name		HPE103	HPE203	HPE104	HPE204
Product form		Base Polymer	Pre-compound	Base Polymer	Pre-compound
Characteristic		General use	General use	General use for High Temp.	General use for High Temp.
Moony viscosity ML1+10@121℃		40	33	40	33
Formulation (Curing system)		Refer to Standard recipe 1 (HPE103/TAIC)	Refer to Standard recipe 2 (HPE103/CLZ24)	Refer to Standard recipe 1 (HPE104/TAIC)	Refer to Standard recipe 2 (HPE104/CLZ24)
Typical Properties					
Physical Properties (ISO7619-1, ISO37 Type1)					
Hardness, Duro A, peak		76	73	74	66
Tensile Strength (MPa)		16.3	21.4	20.2	18.2
Elongation (%)		160	220	150	190
33% Acetic acid, 100 ℃ × 200 h (ISO1817 Type 1)					
Hardness change (Points)		-4	-4	-3	-3
Change of Tensile Strength (%)		-24	-15	-20	-3
Change of Elongation (%)		0	+4	+7	+16
Volume Change (%)		+4	+4	+5	+4
Glacial Acetic acid, 100 ℃ × 200 h (ISO1817 Type 1)					
Hardness change (Points)		-7	-4	-6	-5
Change of Tensile Strength (%)		-21	-22	-15	-16
Change of Elongation (%)		+6	0	+13	+16
Volume Change (%)		+5	+5	+5	+5
Compression Set (%) [ASTM D1414/D395] [P-24 O-ring]					
200 ℃	× 70 h	19	30	14	12
	× 168 h	33	35	22	14
	× 500 h	70	44	47	16
	× 1000 h	92	49	64	21
230 ℃	× 70 h	62	41	48	17
	× 168 h	99	49	79	22
	× 500 h	>100	64	>100	29
	× 1000 h	-	75	-	34
250 ℃	× 70 h	>100	42	85	23
	× 168 h	-	55	>100	27
	× 500 h	-	74	-	37
	× 1000 h	-	84	-	43
TR-10 (℃) [ISO 2921]		-2	-2	-1	-1

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Product name	HPE103	HPE203	HPE104	HPE204
Product form	Base polymer	Pre-compound	Base polymer	Pre-compound
Characteristic	General use	General use	General use for High Temp.	General use for High Temp.
Moony viscosity ML1+10@121℃	40	33	40	33
Formulation Curing system	Refer to Standard recipe 1 (HPE103/TAIC)	Refer to Standard recipe 2 (HPE103/CLZ24)	Refer to Standard recipe 1 (HPE104/TAIC)	Refer to Standard recipe 2 (HPE104/CLZ24)
Chemical environment				
Steam (200 ℃ × 200 h)	A	A	A	A
Hot water (200 ℃ × 200 h)	A	B	A	B
33% Acetic acid (100 ℃ × 200 h)	A	A	A	A
Glacial acetic acid (100 ℃ × 200 h)	B	B	B	B
98% H_2SO_4 (80 ℃ × 70 h)	A	A	A	A
65% HNO_3 (80 ℃ × 168 h)	A	A	A	A
HCl (80 ℃ × 200 h)	A	A	A	A
25% NH_3 (80 ℃ × 200 h)	A	A	A	A
50% NaOH (80 ℃ × 72 h)	A	A	A	A
50%KOH (125℃ × 168 h)	A	A	A	A
Hexamethylene diamine (80 ℃ × 200 h)	A	A	A	A
Methanol (80 ℃ × 200 h)	A	A	A	A
Methyl ethyl ketone (80 ℃ × 200 h)	C	C	B	A
Fluorocarbon group (80 ℃ × 200 h)	E	E	E	E

A : Best	B : Good	C : Fair	D : Poor	E : Not recommend

[Standard compound recipes and cure conditions]

Standard compound recipe	1	2
Base polymer (phr)	100	-
Pre-compound (phr)	-	100
N990 Carbon black (phr)	10	10
TAIC WH-60 (phr)	3.5	-
Perhexa™ 25B-40 (phr)	2	2
Press-cure	10min at 160℃	10min at 160℃
Post-cure	6h at 200℃	6h at 250℃

Note:

- ***HPE103 & HPE104 is a base polymer.***
- ***HPE203 & HPE204 is a pre-compound of base polymer and curative, CLZ24. HPE203 consists of HPE103 and CLZ24. HPE204 consists of HPE104 and CLZ24.***
- ***CLZ24 curing system provides excellent heat resistance.***

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ELTAS™ HPE Series

FFKM PRODUCTS CATALOG

Peroxide Curable FFKM - Full-compound -

Product name		HPE500	HPE505	HPE600	HPE606
Product form		Full-compound	Full-compound	Full-compound	Full-compound
Characteristic		High hardness	High hardness	Chemical resistance	Chemical resistance
Color (Compound/After molding)		Black/Black	Black/Black	Black/Black	Black/Black
Curing system		TAIC	CLZ24	TAIC	CLZ24
Curing condition	Press-cure	160℃/10min			
	Post-cure	200℃/6h	250℃/6h	200℃/6h	250℃/6h
Typical Properties					
Physical Properties (ISO7619-1, ISO37 Type1)					
Hardness, Duro A	Peak	92	91	81	73
	3S	88	88	78	TBA
Tensile Strength (MPa)		21.8	23.9	22.3	26.4
Elongation (%)		120	140	160	180
33% Acetic acid, 100 ℃ × 200 h (ISO1817 Type 1)					
Hardness change (Points)		-17	-23	-5	TBA
Change of Tensile Strength (%)		-22	-11	-19	TBA
Change of Elongation (%)		-23	-32	-6	TBA
Volume Change (%)		+43	+64	+5	TBA
Glacial Acetic acid, 100 ℃ × 200 h (ISO1817 Type 1)					
Hardness change (Points)		-12	-16	-5	TBA
Change of Tensile Strength (%)		-22	-20	-19	TBA
Change of Elongation (%)		-11	-21	-6	TBA
Volume Change (%)		+12	+15	+12	TBA
Compression Set (%) [ASTM D1414/D395] [P-24 O-ring]					
200 ℃	× 70 h	11	22	17	24
	× 168 h	13	27	31	TBA
	× 300 h	16	31	48	TBA
	× 500 h	19	36	60	36
	× 750 h	20	38	73	TBA
	× 1000 h	27	41	82	40
230 ℃	× 70 h	19	33	49	TBA
	× 168 h	37	39	86	TBA
	× 300 h	77	44	>100	TBA
	× 500 h	>100	49	-	TBA
	× 750 h	-	52	-	TBA
	× 1000 h	-	57	-	TBA
250 ℃	× 70 h	80	46	>100	44
	× 168 h	>100	53	-	TBA
	× 300 h	-	60	-	TBA
	× 500 h	-	69	-	76
	× 750 h	-	76	-	TBA
	× 1000 h	-	85	-	TBA
TR-10 (℃) [ISO 2921]		-3	-5	-1	-2

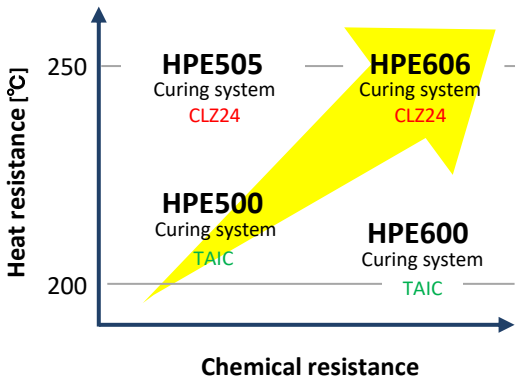
ELTAS™ HPE Series FFKM PRODUCTS CATALOG

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Product name		HPE500	HPE505	HPE600	HPE606
Product form		Full-compound	Full-compound	Full-compound	Full-compound
Characteristic		High hardness	High hardness	Chemical resistance	Chemical resistance
Color (Compound/After molding)		Black/Black	Black/Black	Black/Black	Black/Black
Curing system		TAIC	CLZ24	TAIC	CLZ24
Curing condition	Press-cure	160℃/10min			
	Post-cure	200℃/6h	250℃/6h	200℃/6h	250℃/6h
Chemical environment					
Steam (200 ℃ × 200 h)		A	A	A	TBA
Hot water (200 ℃ × 200 h)		A	A	A	TBA
33% Acetic acid (100 ℃ × 200 h)		E	E	A	TBA
Glacial acetic acid (100 ℃ × 200 h)		E	E	B	TBA
98% H_2SO_4 (80 ℃ × 70 h)		A	A	A	TBA
65% HNO_3 (80 ℃ × 168 h)		C	C	A	TBA
HCl (80 ℃ × 200 h)		A	A	A	TBA
25% NH_3 (80 ℃ × 200 h)		A	A	A	TBA
50% NaOH (80 ℃ × 72 h)		A	A	A	TBA
50%KOH (125℃ × 168 h)		A	A	A	TBA
Hexamethylene diamine (80 ℃ × 200 h)		A	A	A	TBA
Methanol (80 ℃ × 200 h)		A	A	A	TBA
Methyl ethyl ketone (80 ℃ × 200 h)		C	C	C	TBA
Fluorocarbon group (80 ℃ × 200 h)		E	E	E	TBA

A : Best	B : Good	C : Fair	D : Poor	E : Not recommend

[Heat vs. Chemical resistance]



[Selection guide]

- **HPE500 series, is recommendable when to use for exposed high-pressure gases.**
- **HPE600 series, is recommendable when to require much better chemical resistance.**
- **CLZ24 curing system provides much higher heat resistance performance than TAIC curing system.**

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