

Regarding effects on new refrigerant plastic material

Compatibility with plastics

(50°Cx5 days: Effect Weight change rate (%) /Volume change rate (%))

	R-410A	R-407C	R-404A	R-507A	R-22
Polyvinyl chloride	2/2	1/1	0/0	0/0	12/13
Polyethylene	1/1	1/1	1/1	1/1	3/2
Polypropylene	2/2	2/2	3/2	2/2	6/4
Polystyrene	6/4	3/2	1/1	0/0	Dissolved
Polymethyl methacrylate (Acrylic)	34/29	39/33	0/0	0/0	Dissolved
Polycarbonate	6/4	3/2	0/0	0/0	10/7
Phenoril resin	-1/-1	-1/-1	-1/-1	-1/-1	0/0
Epoxy resin	0/-1	0/-1	0/-1	0/-1	-2/-2
Polyphenylene oxide	6/4	3/2	0/0	0/1	12/8
ABS resin	9/13	7/5	0/0	0/0	Dissolved

(50°Cx5 days: Effect Weight change rate (%) /Volume change rate (%))

	R-32	R-125	R-134a	R-143a	R-22
Polyvinyl chloride	5/5	0/-2	0/0	-3/-4	12/13
Polyethylene	1/1	1/1	1/0	1/-4	3/2
Polypropylene	0/0	1/-1	2/1	3/-1	6/4
Polystyrene	10/8	1/-1	1/1	1/-2	Dissolved
Polymethyl methacrylate (Acrylic)	34/35	6/5	34/28	0/-1	Dissolved
Polycarbonate	11/14	0/0	0/0	0/1	10/7
Phenoril resin	0/0	0/0	-1/-1	0/2	0/0
Epoxy resin	0/0	0/0	2/3	0/1	-2/-2
Polyphenylene oxide	10/8	0/0	0/-1	1/1	12/8
ABS resin	19/16	0/0	1/1	0/-1	Dissolved

(50°Cx5 days: Effect Weight change rate (%) /Volume change rate (%))

Refrigerant	Lubricant	PTFE	Nylon 66
R-410A	POE	2/5	0/0
	None	2/5	-1/-1
R-407C	POE	2/3	-1/-1
	None	2/2	-1/-1
R-404A	POE	4/8	1/0
	None	3/0	-1/0
R-507A	POE	3/8	0/0
	None	3/0	-1/0
R-22	Mineral oil	3/3	2/1
	None	2/2	-1/6

	R-410A	R-407C	R-507A	R-507A POE	R-134a
Nylon	S	S	S	D	S
PTFE	S	S	S	S	S
PEEK	S	S	S	S	S
ABS resin	U	U	U	U	S
Polypropylene	D	D	D	D	Su
Polyphenylene sulfide	U	U	D	D	Su
Polyethylene terephthalate	D	D	S	S	S
Polysulfone	D	D	S	S	S
Polyimide	S	S	S	D	S
Polyetherimide	S	S	S	S	S
Polyphthalamide	D	D	D	U	S
Polyamide-imide	S	S	D	S	S
Acetal resin	D	D	S	U	S
Phenol resin	S	S	S	D	S
Epoxy film	-	-	S	S	S

S: Compatible Su: Compatible (with exceptions)

U: Not compatible Us: Not compatible (with exceptions)

D: Compatibility depends on compounding ratio