















جدول 1: شرح مواد خفوشه گازهای سرد کننده در سیستم های تهویه مطبوع

Ozone Depleting Potential*	Chemical formula	Chemical name	ASHRAE Code	Substance
0.04	CHFCl <sub>2</sub>	Dichlorofluoromethane	R-21	HCFC-21**
0.055	CHF <sub>2</sub> Cl	Monochlorodifluoromethane	R-22	HCFC-22**
0.02	CH <sub>2</sub> Cl	Monochlorofluoromethane	R-31	HCFC-31
0.01-0.04	C <sub>2</sub> HFC <sub>4</sub>	Tetrachlorofluoroethane	R-121	HCFC-121
0.02-0.08	C <sub>2</sub> HF <sub>2</sub> Cl <sub>3</sub>	Trichlorodifluoroethane	R-122	HCFC-122
0.02-0.06	C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub>	Dichlorotrifluoroethane	R-123	HCFC-123**
0.02-0.04	C <sub>2</sub> HF <sub>4</sub> Cl	Monochlorotetrafluoroethane	R-124	HCFC-124**
0.007-0.05	C <sub>2</sub> H <sub>2</sub> FC <sub>3</sub>	Trichlorofluoroethane	R-131	HCFC-131
0.008-0.05	C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub>	Dichlorodifluoroethane	R-132	HCFC-132
0.02-0.06	C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl	Chlorotrifluoroethane	R-133	HCFC-133
0.005-0.07	C <sub>2</sub> H <sub>3</sub> FC <sub>2</sub>	Dichlorofluoroethane	R-141	HCFC-141
0.11	CH <sub>3</sub> CFCl <sub>2</sub>	Dichlorofluoroethane	R-141b	HCFC-141b**
0.008-0.07	C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Cl	Chlorodifluoroethane	R-142	HCFC-142
0.065	CH <sub>3</sub> CF <sub>2</sub> Cl	Chlorodifluoroethane	R-142b	HCFC-142b**
0.003-0.005	C <sub>2</sub> H <sub>4</sub> Cl	Chlorofluoroethane	R-151	HCFC-151
0.015-0.07	C <sub>3</sub> HFC <sub>6</sub>	Hexachlorofluoropropane	R-221	HCFC-221
0.01-0.09	C <sub>3</sub> HF <sub>2</sub> Cl <sub>5</sub>	Pentachlorodifluoropropane	R-222	HCFC-222
0.01-0.08	C <sub>3</sub> HF <sub>3</sub> Cl <sub>4</sub>	Tetrachlorotrifluoropropane	R-223	HCFC-223
0.01-0.09	C <sub>3</sub> HF <sub>4</sub> Cl <sub>3</sub>	Trichlorotetrafluoropropane	R-224	HCFC-224
0.02-0.07	C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub>	Dichloropentafluoropropane	R-225	HCFC-225
0.025	CF <sub>3</sub> CF <sub>2</sub> CHCl <sub>2</sub>	Dichloropentafluoropropane	R-225ca	HCFC-225ca**
0.033	CF <sub>2</sub> ClCF <sub>2</sub> CHClF	Dichloropentafluoropropane	R-225cb	HCFC-225cb**
0.02-0.10	C <sub>3</sub> HF <sub>6</sub> Cl	Monochlorohexafluoropropane	R-226	HCFC-226
0.05-0.09	C <sub>3</sub> H <sub>2</sub> FC <sub>5</sub>	Pentachlorofluoropropane	R-231	HCFC-231
0.008-0.10	C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub>	Tetrachlorodifluoropropane	R-232	HCFC-232
0.007-0.23	C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub>	Trichlorotrifluoropropane	R-233	HCFC-233
0.01-0.28	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub>	Dichlorotetrafluoropropane	R-234	HCFC-234
0.03-0.52	C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Cl	Monochloropentafluoropropane	R-235	HCFC-235
0.004-0.09	C <sub>3</sub> H <sub>3</sub> FC <sub>4</sub>	Tetrachlorofluoropropane	R-241	HCFC-241
0.005-0.13	C <sub>3</sub> H <sub>3</sub> F <sub>2</sub> Cl <sub>3</sub>	Trichlorodifluoropropane	R-242	HCFC-242
0.007-0.12	C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> Cl <sub>2</sub>	Dichlorotrifluoropropane	R-243	HCFC-243
0.009-0.14	C <sub>3</sub> H <sub>3</sub> F <sub>4</sub> Cl	Monochlorotetrafluoropropane	R-244	HCFC-244
0.001-0.01	C <sub>3</sub> H <sub>4</sub> FC <sub>3</sub>	Monochlorotetrafluoropropane	R-251	HCFC-251
0.005-0.04	C <sub>3</sub> H <sub>4</sub> F <sub>2</sub> Cl <sub>2</sub>	Dichlorodifluoropropane	R-252	HCFC-252
0.003-0.03	C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Cl	Monochlorotrifluoropropane	R-253	HCFC-253
0.002-0.02	C <sub>3</sub> H <sub>5</sub> FC <sub>2</sub>	Dichlorofluoropropane	R-261	HCFC-261
0.002-0.02	C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Cl	Monochlorodifluoropropane	R-262	HCFC-262
0.001-0.03	C <sub>3</sub> H <sub>6</sub> Cl	Monochlorofluoropropane	R-271	HCFC-271



جدول 2: ترکیب مواد تشکیل دهنده و خواص فیزیکی و شیمیایی مواد تشکیل دهنده

ASHRAE number	Components	Percentage composition	ODP	GWP (100_yr)
R-401A	R-22/152a/124	53.0/13.0/34.0	0.033	1200
R-401B	R-22/152a/124	61.0/11.0/28.0	0.036	1300
R-401C	R-22/152a/124	33.0/15.0/52.0	0.027	930
R-402A	R-125/290/22	60.0/2.0/38.0	0.019	2800
R-402B	R-125/290/22	38.0/2.0/60.0	0.030	2400
R-403A	R-290/22/218	5.0/75.0/20.0	0.038	3100
R-403B	R-290/22/218	5.0/56.0/39.0	0.028	4500
R-405A	R-22/152a/142b/C318	45.0/7.0/5.5/42.5	0.026	5300
R-406A	R-22/600a/142b	55.0/4.0/41.0	0.056	1900
R-408A	R-125/143a/22	7.0/46.0/47.0	0.024	3200
R-409A	R-22/124/142b	60.0/25.0/15.0	0.046	1600
R-409B	R-22/124/142b	65.0/25.0/10.0	0.045	1600
R-411A	R-1270/22/152a	1.5/87.5/11.0	0.044	1600
R-411B	R-1270/22/152a	3.0/94.0/3.0	0.047	1700
	R-1270/22/152a	3.0/95.5/1.5	0.032	1600
R-412A	R-22/218/142b	70.0/5.0/25.0	0.053	2300
R-414A	R-22/124/600a/142b	51.0/28.5/4.0/16.5	0.043	1500
R-414B	R-22/124/600a/142b	50.0/39.0/1.5/9.5	0.039	1400
R-415A	R-22/152a	82.0/18.0	0.041	1500
R-415B	R-22/152a	25.0/75.0	0.013	550
	R-22/152a	52.0/48.0	0.018	940
	R-22/152a	60.0/40.0	0.020	1100
R-416A	R-134a/124/600	59.0/39.5/1.5	0.008	1100
R-418A	R-290/22/152a	1.5/96.0/2.5	0.048	1700
R-420A	R-134a/142b	88.0/12.0	0.008	1500
R-501	R-22/12	75.0/25.0	NA	NA
R-502	R-22/115	48.8/51.2	0.250	4700
R-505	R-12/31	78.0/22.0	NA	NA
R-506	R-31/114	55.1/44.9	NA	NA
R-509A	R-22/218	44.0/56.0	0.022	5700







بە قەرەبوو 4 (ر): دەستەجەبە ئەمەلگە ئاشۇرۇش ۋە تەنھەرىكەت ئەمەلگە ئاشۇرۇش ئارقىلىق تەنھەرىكەت ئەمەلگە ئاشۇرۇش

Substance	ASHRAE Code	Total mass in Kg	Use of HCFC/ HCFC blends	Country of imported HCFC/HCFC Blends	Customs Code
HCFC-21	R-21				
HCFC-22	R-22				
HCFC-31	R-31				
HCFC-121	R-121				
HCFC-122	R-122				
HCFC-123	R-123				
HCFC-124	R-124				
HCFC-131	R-131				
HCFC-132	R-132				
HCFC-133	R-133				
HCFC-141	R-141				
HCFC-141b	R-141b				
HCFC-142	R-142				
HCFC-142b	R-142b				
HCFC-151	R-151				
HCFC-221	R-221				
HCFC-222	R-222				
HCFC-223	R-223				
HCFC-224	R-224				
HCFC-225	R-225				
HCFC-225ca	R-225ca				
HCFC-225cb	R-225cb				
HCFC-226	R-226				
HCFC-231	R-231				
HCFC-232	R-232				
HCFC-233	R-233				
HCFC-234	R-234				
HCFC-235	R-235				
HCFC-241	R-241				
HCFC-242	R-242				
HCFC-243	R-243				
HCFC-244	R-244				
HCFC-251	R-251				
HCFC-252	R-252				
HCFC-253	R-253				
HCFC-261	R-261				
HCFC-262	R-262				
HCFC-271	R-271				

جدول 4 (س): استخدام مواد التبريد في أنظمة التبريد والتكييف في المملكة العربية السعودية

ASHRAE number	Components	Total mass in kg	Use of ODS	Country of Imported ODS	Customs Code
R-401A	R-22/152a/124				
R-401B	R-22/152a/124				
R-401C	R-22/152a/124				
R-402A	R-125/290/22				
R-402B	R-125/290/22				
R-403A	R-290/22/218				
R-403B	R-290/22/218				
R-405A	R-22/152a/142b/C318				
R-406A	R-22/600a/142b				
R-408A	R-125/143a/22				
R-409A	R-22/124/142b				
R-409B	R-22/124/142b				
R-411A	R-1270/22/152a				
R-411B	R-1270/22/152a				
	R-1270/22/152a				
R-412A	R-22/218/142b				
R-414A	R-22/124/600a/142b				
R-414B	R-22/124/600a/142b				
R-415A	R-22/152a				
R-415B	R-22/152a				
	R-22/152a				
	R-22/152a				
R-416A	R-134a/124/600				
R-418A	R-290/22/152a				
R-420A	R-134a/142b				
R-501	R-22/12				
R-502	R-22/115				
R-505	R-12/31				
R-506	R-31/114				
R-509A	R-22/218				









