Γ " CFC Chloro Fluoro Carbon 31 Dupont CFC-12 ,

HCFC-227 CFC 2 CFC 가 가 , 가 , CFC CFC , 가 CFC가 CFC 93 CFC 35% CFC

가

**GNP** 

10%

CFC

가

10

					,			
CFC	92. 7.1	86	94. 1.1	75%			10	, 2003
(ANNEX A.	95. 1.1	50%	96. 1.1	100%				0.3kg/1
GROUP )	97. 1.1	85%				:	가	
	2000. 1.1	100%						
HALON	92. 1.1	20%						
(ANNEX A.	97. 1.1	85%	94. 1.1	100%				
GROUP )	2000. 1.1	100%	(	)				
CFC	93. 1.1	20%				89		
(ANNEX B.	97. 1.1	85%	94. 1.1	75%				
GROUP )	2000. 1.1	100%	96. 1.1	100%				
CTC	95. 1.1	85%				89		
(ANNEX B.	2000. 1.1	100%	96. 1.1	100%				
GROUP )								
1,1,1-TC	93. 1.1	89				89		
(ANNEX B.	95. 1.1	30%	94. 1.1	50%				
GROUP)	2000. 1.1	70%	96. 1.1	100%				
	2005. 1.1	100%	(	)				
HCFC			95. 1.1	89		89	CFC	3.1%
(ANNEX C.			2004. 1.1	35%		89	HCFC	
GROUP )			2010. 1.1	65%				
			2015. 1.1	90%		94~	95	
			2020. 1.1	99.5%				
			2030. 1.1	100%				
)	UNEP		. 2003		가 (		: 0.3	KG/1 )

CFC , 가 가 가

가

: M/T) 1994 1995 1996 1997 1998 CFC-11 4,224 945 600 2,870 1,910 CFC CFC-12 3,204 2,260 1,630 1,170 1,020 7,428 1,620 5,130 3,540 2,115 HFC-134a 1,117 2,090 2,800 3,370 3,680 HCFC-141b 1,076 2,260 3,380 4,420 5,040 HCFC-142b 300 350 50 150 250 300 HCFC-123 20 70 150 200 6,090 7,300 HCFC-22 6,600 7,030 7,150 8,353 11,170 13,610 15,440 16,670

CFC CFC 92 1 1 CFC 96 1 1

가

CFC CFC CFC CFC

CFC				
	CFC			
1.	. , , ,	CFC-12	HFC-134a	: , ,
2.		CFC-11	HCFC-123	, ,
3.		CFC-12	HCFC-22	가 : , ,
4. Show Case		CFC-12		
5.		CFC-11/12		: ,
6.	가			,
1. , , ,	. ,	CFC-11	HCFC-141b	,
	•		HCFC-142b	, , ,
2. , , ,		CFC-11	HCF-22	, ,
,				, ,
				, ,
3. PS		CFC-12		, , ,
				, ,
				, ,
1.	•	CFC-113	HCFC-225	
	• ,		Ca/Cb	
2.			HCFC-141b	( 2000 )
3.	•		,	
	•			
	•			
1.	•	CFC-11		, ,
2. 가		/12	HCFC-141b	, ,
3.	•	11/4	HCFC-142b	, , ,
	•		HCFC-22	
	· Propellant			

CFC KAIST ,

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ARI R22 AREP	R22	
Refrigerants	Composition by weight	Baseline reference
R290(Propane)		R22
R134a		R22
R717(Ammonia)	60/40	R22
R32/R125	30/70	R22
R32/R134a	25/75	R22
R32/R134a	35/65	R22
R32/R227ea	10/70/20	R22
R32/R125/R134a	30/10/60	R22
R32/R125/R134a	20/55/5/20	R22
R32/R125/R290/R134a	45/55	R22
R125/R143a	45/52/4	R502
R125/R143a/R134a	10/45/45	R502
R32/R125/R143a		R502

) ARI : , AREP : Alternative Refrigerants Evaluation Program

UNEP 2003 CFC 1 0.3KG 가 , 가 가 가 .

CFC-11					(	: M/T)
		1994	1995	1996	1997	1998
		3,700	3,800	4,040	4,280	4,540
	(Less)	1,800	1,900	2,020	2,140	2,270
	CFC-11	1,730	870	430	-	-
	HCFC-141b	170	1,030	1,590	2,140	2,270
		1,210	1,340	1,430	1,540	1,640
	(Less)	340	670	720	770	820
	CFC-11	230	-	-	-	-
	HCFC-141b	640	670	710	770	820
		3,660	3,940	4,260	4,605	5,000
		1,830	1,970	2,130	2,300	2,500
	CFC-11	1,564	1,410	1,050	792	550
	HCFC-141b	266	560	1,080	1,510	1,950
		350	1,000	1,050	1,100	1,150
	CFC-11	300	250	150	-	-
	M.C	650	750	900	1,100	1,150
		420	440	470	490	530
/	CFC-11	400	340	280	150	50
	HCFC-123	20	70	150	200	300
		-	30	40	140	180
		9,940	10,520	11,250	12,015	12,860
	CFC-11	4,224	2,870	1,910	945	600
	HCFC-141b	1,076	2,260	3,380	4,420	5,040
	HCFC-123	20	70	150	200	300
		3,970	4,540	4,870	5,210	5,590
	M.C	650	750	900	1,100	1,150
		-	30	40	140	180

가 가 가 PU CFC 가가 . , 92 11 17 25 4 7 가 HCFC 96 1 1 2003 89 . , 2030 HCFC 가

CFC-12					(	: M/T)
		1994	1995	1996	1997	1998
		649	680	720	750	790
	CFC-12	631	310	160	-	-
	HFC-134a	18	370	560	750	790
		1,700	1,820	1,950	2,080	2,230
	CFC-12	669	330	100	-	-
	HFC-134a	1,031	1,490	1,850	2,080	2,230
		1,600	1,680	1,760	1,850	1,940
	CFC-12	1,532	1,230	980	780	630
	HFC-134a	68	230	390	540	660
		-	220	390	530	650
		900	960	1,030	1,100	1,180
P . S	CFC-12	313	330	330	330	330
	HFC-142b	50	150	250	300	350
	HCFC-22	537	480	450	470	500
		59	60	60	60	60
	CFC-12	59	60	60	60	60
		4,908	5,200	5,520	5,840	6,200
	CFC-12	3,204	2,260	1,630	1,170	1,020
	HFC-134a	1,117	2,090	2,800	3,370	3,680
	HCFC-142b	50	150	250	300	350
	HCFC-22	537	480	450	470	500
		-	220	390	530	650

(CFC) Label 6 EPA

. (CFC 113 1,1,1 TCE) 15%

, , , CFC113 , CFC113

HCFC-2	2				(	: M/T)
		1994	1995	1996	1997	1998
		1,700	1,900	2,050	2,150	2,300
		190	200	210	220	230
	P.S	537	480	450	470	500
	HALON	240	240	240	240	240
		100	150	200	200	200
( )		2,767	2,970	3,150	3,280	3,470
		490	520	550	580	610
		400	400	400	400	400
		380	380	380	380	380
		470	500	510	520	530
	A/S	590	660	720	750	750
		993	1,170	1,320	1,240	1,160
		3,323	3,630	3,880	3,870	3,830
		6,090	6,600	7,030	7,150	7,300

		(	: ODP	M/T, %))
1992	1993	1994	1995	1996
30,831	34,200	38,000	42,200	48,000
22,212	12,355	12,355	12,355	12,355
8,619	21,845	25,645	29,845	35,645
28	64	67	71	74

가

가

, 가

CFC113 1,1,1 TCE 가

Vanishing Oil

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가

가

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< 1994/5/23>