Basic physical properties

Cleaning agent		Fluoride	Chlorine-type		
Physical Properties	Units	**HCFC-225ca/ HCFC-225cb**	**methylene chloride**	**Trichloroethylene**	**Tetrachlorethylene**
Chemical Formula		**$C_3HCl_2F_5$**	**CH_2Cl_2**	**$CHCl=CCl_2$**	**$CCl_2=CCl_2$**
Molecular Weight		202.94	84.94	131.39	165.85
Boiling Point	[°C]	54	40.2	87.3	121.2
Freezing Point	[°C]	-131	-94.9	-86.4	-22.35
Specific Gravity (20/4°C)		* 1.55	1.327	1.465	1.623
Viscosity (20°C)	[mPa·s]	* 0.59	0.425	0.566	0.88
Surface Tension (20°C)	[mN/m]	* 16.2	27.89	29.5	32.32
Specific Heat (20°C)	[kJ/kg・K] 1)	1	1.16	0.933	0.858
Latent Heat of Vaporisation (boiling point)	[kJ/kg] 2)	145	329	239	209
Thermal conductivity (20°C)	[W/m・K]	-	0.155	0.115	0.127
Vapor Density (air=1)		7	2.93	4.54	5.83
Vapor Pressure (20°C)	[kPa] 3)	* 37.7	46.5	7.7	2.1
KB (Kauri butanol) Value		31	136	130	90
Solubility with Water (25°C)	[g-water/100g-solvent]	0.031	0.17	0.032	0.0105
Solubility in Water (25°C)	[g-solvent/100g-water]	0.033	1.98	0.137	0.015
Dielectric Constant (20°C)		* 4.1	9.1	3.4	2.2
Flash Point	[°C]	None	None	None	None
Ignition Range	[vol%]	None	13~23	8-10.5	None
Allowable Concentration () is the time-weighted average recommended value	[volppm]	100	50	10	50
ODP (CFC11=1.0)		0.03	0.007	0.005	0.005

*mark data is the value at 25°C

1) 0.24 [cal/g・°C] = 1 [kJ/kg・K]

2) 0.24 [cal/g] = 1 [kJ/kg]

3) 760mmHg = 101 [kPa]