

# COLD REFRIGERANT

## Material Safety Data Sheet

### IDENTIFICATION

<b>Product Names:</b> COLD 600, COLD 12, COLD 134, COLD 22, COLD 502, COLD 11, COLD 13, COLD 1270  <b>Other Name:</b> Refrigerant grade products or blends containing Propane, Isobutane and Ethane	<b>UN NUMBERS</b>							
	<b>COLD</b> <b>600</b>	<b>COLD</b> <b>12</b>	<b>COLD</b> <b>134</b>	<b>COLD</b> <b>22</b>	<b>COLD</b> <b>502</b>	<b>COLD</b> <b>11</b>	<b>COLD</b> <b>13</b>	<b>COLD</b> <b>1270</b>
	1969	1965	1965	1978	1965	1265	1961	1077
Dangerous Goods Class:	2.1							
Subsidiary Risk:	None							
HAZCHEM Code:	2 WE							
Poison Schedule Number(s):	None allocated							
Use: Refrigerant grade products with zero Ozone Depletion Potential (O.D.P.) for use in the domestic and commercial markets								

### PHYSICAL DESCRIPTION / CHEMICAL PROPERTIES

Product Names:	<b>COLD</b> <b>600</b>	<b>COLD</b> <b>12</b>	<b>COLD</b> <b>134</b>	<b>COLD</b> <b>22</b>	<b>COLD</b> <b>502</b>	<b>COLD</b> <b>11</b>	<b>COLD</b> <b>13</b>	<b>COLD</b> <b>1270</b>
Appearance:	Clear, colourless liquified gas-evaporating to clear colourless vapour with sweet smell							
Boiling Point: (°C)	- 12 °C	-31.5 °C	-30.5 °C	-42 °C	-49 °C	28 °C	-88 °C	-47.7 °C
Vapour Pressure: kPa /at x °C	350/25 °C	650/25 °C	650/25 °C	960/25 °C	1100/25 °C	79/20 °C	3850/20 °C	1035/25 °C
Specific Gravity of Liquid : (at 20 °C)	0.56	0.53	0.53	0.5	0.49	0.62	0.45	0.53
Specific Gravity of Vapour : at x °C (Air = 1.0)	2.06/15°C	1.78/15°C	1.78/15°C	1.56/15°C	1.52/15°C	2.48/20°C	1.04/20°C	1.81/20°C
Viscosity of Liquid: (at 30 °C)	0.14	0.11	0.11	0.09	0.08		0.078	0.09
Solubility in water:	Insoluble	Insoluble	Insoluble	Insoluble	Insoluble	Insoluble	Insoluble	Insoluble
Auto-ignition (°C) 0 psi	460	460	460	450	460	420	515	460
Lower Explosive Limit (LEL):	1.85	1.95	1.95	2	2.2	1.4	3	2
Upper Explosive Limit (UEL):	8.5	9.1	9.1	10	10.2	7.6	12.5	11.1
Other Properties:	COLD 600, COLD 12, COLD 134, COLD 22, COLD 502, COLD 11, COLD 13 and COLD 1270 are incompatible with strong oxidising agents, peroxides, chlorine and concentrated nitric acid.							
Oil Type	All COLD refrigerants possess full chemical compatibility with all common refrigeration lubricants. <i>The only oils that COLD refrigerants are incompatible with is silicone and silicate based lubricants.</i> COLD refrigerants are soluble with all refrigeration oils. Under high pressure and low temperature conditions increased solubility can occur with certain oil types and this should be considered when making a selection. [Mineral (M), Alkyl benzene (AB), Semi-synthetic (AB/M), Polyolester (POE), Poly alkyl glycol (PAG), Poly-alpha-olefins (PAO)]							
Chemical Name:	$C_4H_{10}$	$C_3H_8+C_4H_{10}$	$C_3H_8+C_4H_{10}$	$C_3H_8$	$C_2H_6+C_3H_8$	$C_5H_{12}$	$C_2H_6$	$C_3H_6$
Components	Isobutane R 600a	Zeotropic blend of hydro- carbons R 290/ R 600a	Zeotropic blend of hydro- carbons R 290/ R 600a	Propane R290/ Propane	Zeotropic blend of hydro- carbons R 170/ R 290	Isopentane R 601a	Ethane R 170	Propylene R 1270
CAS Number	Isobutane Propane	0075 - 28 - 5 0074 - 98 - 6	Ethane Isopentane	0074 - 84 - 0 78-78-4	Propylene	115-07-1		