



R-1233zd

TECHNICAL DATA SHEET

Components

Chemical Name	Chemical Formula	%By weight	CAS No
Trans-1-chloro-3,3,3-trifluoroprop-1-ene (R-1233zd)	Trans $\text{CF}_3\text{-CH=CClH}$	% 100	102687-65-0

Physical and chemical properties

At normal temperature and pressure, R-1233zd is a colourless gas.

Physical state.....	Gas
Form.....	Compressed liquefied gas
Molecular Weight (g/mol).....	130.50
Boiling Point at 1 atm, (°C)	18.31
Melting Point (°C)	-78
Liquid pressure 25°C, (bar).....	1.298
Density at 25°C, (kg/m ³)	1262.8
Lower Flammability Limit (kg/m ³).....	None
Critical Temperature, °C.....	165.6
Critical Pressure, bar.....	35.73
Critical Density, (kg/m ³)	480.20
ODP.....	0
GWP.....	5*

Commercial Specifications (ISO9002)

Purity, %, min.....	99.5
Moisture content, ppm by weight.	10
Acid Value, ppm by weight.....	0.1
Residue, mg.kg.....	100

*The regulation on fluorinated greenhouse gases of EU 517-2014 has been taken considered.



Thermodynamic Properties

TEMP. (°C)	ABSOLUTE PRESSURE (bar)	DENSITY (Kg/dm ³)		ENTHALPY (kJ/Kg)		ENTROPY (kJ/Kg.K)	
		LIQUID	VAPOUR	LIQUID	VAPOUR	LIQUID	VAPOUR
-50	0,028	1,430	0,196	138,893	369,370	0,753	1,786
-45	0,040	1,419	0,274	145,013	372,864	0,780	1,779
-40	0,056	1,409	0,376	151,125	376,378	0,807	1,773
-35	0,076	1,398	0,506	157,231	379,908	0,833	1,768
-30	0,103	1,387	0,672	163,334	383,452	0,858	1,763
-25	0,138	1,377	0,880	169,435	387,008	0,883	1,760
-20	0,181	1,366	1,136	175,537	390,573	0,907	1,757
-15	0,235	1,355	1,449	181,643	394,144	0,931	1,754
-10	0,301	1,344	1,828	187,754	397,719	0,954	1,752
-5	0,382	1,333	2,282	193,872	401,295	0,977	1,751
0	0,479	1,321	2,820	200,000	404,870	1,000	1,750
5	0,594	1,310	3,455	206,140	408,441	1,022	1,750
10	0,731	1,298	4,196	212,295	412,005	1,044	1,749
15	0,892	1,287	5,058	218,467	415,560	1,066	1,750
20	1,080	1,275	6,052	224,657	419,104	1,087	1,750
25	1,296	1,263	7,192	230,870	422,632	1,108	1,751
30	1,546	1,251	8,495	237,107	426,144	1,129	1,752
35	1,831	1,238	9,975	243,370	429,635	1,149	1,753
40	2,155	1,226	11,650	249,664	433,102	1,169	1,755
45	2,521	1,213	13,540	255,990	436,542	1,189	1,757
50	2,933	1,200	15,664	262,351	439,952	1,209	1,758
55	3,395	1,186	18,044	268,751	443,326	1,228	1,760
60	3,909	1,173	20,706	275,193	446,662	1,248	1,762
65	4,481	1,159	23,676	281,680	449,953	1,267	1,765
70	5,113	1,145	26,983	288,217	453,196	1,286	1,767