Chemical Name ; Diborane

Synonym ; Diborane(6)
Diborone hexahydride
Boroethane
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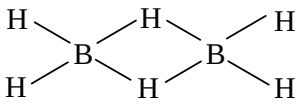
Molecular Weight ; 27.67
Melting Point ; -165 ℃[Merck]
Boiling Point ; -92.5℃[Merck]
Flashing Point ; －
Molecular Formula ; B_2H_6

Chemical Structure



CAS No. ; 19287-45-7
MITI No. ; (1)-1209
ML No. ; －
Specified Chemical Substances ; －

Source of Substance; Nihon Sanso Co., Ltd.
Lot No. ; 4K 49637
Purity ; 0.510%

Vehicle ; He
Exposure Condition ; 25℃, 2hr
Culture Condition ; 37℃, 48hr

Mutagenicity in Bacterial Test ; Posiyive

IARC Evaluation ; not yet cited

Conc. %	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A		TA98		TA1537	
	S9－	S9＋	S9－	S9＋	S9－	S9＋	S9－	S9＋	S9－	S9＋
He	(154)	(164)	(20)	(10)	(34)	(24)	(23)	(43)	(29)	(38)
	180	176	12	3	32	28	29	39	29	26
	190	180	14	7	25	22	26	52	33	38
0 .02	(185)	(178)	(13)	(5)	(29)	(25)	(28)	(46)	(31)	(32)
	166	168	13	9	30	23	37	52	31	34
	180	175	12	5	22	29	24	42	19	37
0 .05	(173)	(172)	(13)	(7)	(26)	(26)	(31)	(47)	(25)	(36)
	200	213	16	8	27	29	46	55	21	27
	192	197	12	2	29	33	33	54	35	27
0 .1	(196)	(205)	(14)	(5)	(28)	(31)	(40)	(55)	(28)	(27)
	226	264	10	2	41	33	52	72	28	27
	258	260	5	4	39	37	43	91	27	32
0 .2	(242)	(262)	(8)	(3)	(40)	(35)	(48)	(82)	(28)	(30)
	375	350	5	3	36	55	87	140	23	20
	335	464	4	4	37	92	109	124	20	24
0 .5	(355)	(407)	(5)	(4)	(37)	(74)	(98)	(132)	(22)	(22)
Judgement	＋	＋	－	－	－	＋	＋	＋	－	－
Specific Mutagenicity #	0.5%	0.5%				0.5%	1.0%	1.0%		
Positive Control	AF-2 (635)	2-AA (4056)	NaN_3 (363)	2-AA (288)	AF-2 (113)	2-AA/20 (1326)	AF-2 (797)	2-AA (912)	9-AA (447)	2-AA (982)

The concentration which was two times of the negative controle value was shown.

Conc. %	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
He	(137)	(134)	(14)	(8)	(22)	(24)	(12)	(36)	(12)	(25)
	114	120	11	5	16	18	12	31	12	15
	116	128	10	4	20	22	14	40	13	28
0 .02	(115)	(124)	(11)	(5)	(18)	(20)	(13)	(36)	(13)	(22)
	132	150	12	2	23	13	19	28	21	27
	133	149	9	10	23	19	20	29	21	14
0 .05	(133)	(150)	(11)	(6)	(23)	(16)	(20)	(29)	(21)	(21)
	139	153	10	6	23	20	24	40	14	10
	129	163	11	4	23	18	25	46	19	17
0 .1	(134)	(158)	(11)	(5)	(23)	(19)	(25)	(43)	(17)	(14)
	149	296	8	7	27	26	45	87	15	12
	193	280	9	8	32	34	46	100	18	8
0 .3	(171)	(288)	(9)	(8)	(30)	(30)	(46)	(94)	(17)	(10)
	203	312	4	6	26	40	57	89	16	13
	206	308	4	9	30	56	56	114	8	15
0 .5	(205)	(310)	(4)	(8)	(28)	(48)	(57)	(102)	(12)	(14)
Judgement	−	+	−	−	−	+	+	+	−	−
Specific Mutagenicity #		0.3%				0.5%	1.0%	1.0%		
Positive Control	AF-2 (430)	2-AA (3745)	NaN_3 (235)	2-AA (185)	AF-2 (124)	2-AA/20 (1487)	AF-2 (669)	2-AA (916)	9-AA (188)	2-AA (460)