1,3,5-Tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1*H*,3*H*,5*H*)-trione

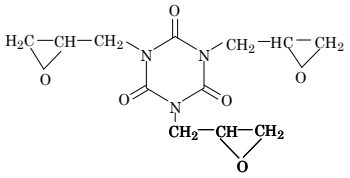
(1,3,5-ﾄﾘｽ(ｵｷｼﾗﾆﾙﾒﾁﾙ)-1,3,5-ﾄﾘｱｼﾞﾝ-2,4,6(1*H*,3*H*,5*H*)-ﾄﾘｵﾝ)

Chemical Name ; 1,3,5-Tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1*H*,3*H*,5*H*)-trione

Synonym ; Tris(2,3-epoxypropyl) isocyanurate
1,3,5-Trisglycidyl-isocyanuric acid
Triglycidyl isocyanurate
1,3,5-ﾄﾘｽ(2,3-ｴﾎﾟｷｼﾌﾟﾛﾋﾟﾙ)
ﾍｷｻﾋﾄﾞﾛ-1,3,5-ﾄﾘｱｼﾞﾝ-2,4,6-ﾄﾘｵﾝ
1,3,5-ﾄﾘｽｸﾞﾘｼｼﾞﾙｲｿｼｱﾇﾙ酸
ﾄﾘｸﾞﾘｼｼﾞﾙｲｿｼｱﾇﾗｰﾄ

Molecular Weight ; 297.27
Melting Point ; 116℃(decomposition)
Boiling Point ; －
Flashing Point ; －
Molecular Formula ; $C_{12}H_{15}N_3O_6$

Chemical Structure



CAS No. ; 2451-62-9
MITI No. ; (5)-1052
ML No. ; －
Specified Chemical Substances ; －

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
Lot No. ; GB01
Purity ; 98.3%

Vehicle ; DMSO

Mutagenicity in Bacterial Test ; Positive

IARC Evaluation ; not yet cited

Experimental Data-1

(B9625-1/2)

Conc. μg/plate	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＋
DMSO	(141)	(143)	(7)	(9)	(17)	(27)	(13)	(25)	(7)	(10)
1 .22	127	152	5	11	20	20	9	30	7	10
	133	139	8	10	15	23	14	25	7	3
	(130)	(146)	(7)	(11)	(18)	(22)	(12)	(28)	(7)	(7)
4 .88	137	155	10	9	21	25	16	18	6	11
	164	142	7	7	17	28	8	21	6	8
	(151)	(149)	(9)	(8)	(19)	(27)	(12)	(20)	(6)	(10)
19 .5	181	162	8	10	26	31	18	26	7	13
	199	152	8	7	31	34	28	17	6	17
	(190)	(157)	(8)	(9)	(29)	(33)	(23)	(22)	(7)	(15)
78 .1	306	245	17	6	29	29	44	34	7	6
	323	249	18	15	30	38	47	31	6	9
	(315)	(247)	(18)	(11)	(30)	(34)	(46)	(33)	(7)	(8)
313	616	504	31	36	17	14	84	108	10	9
	619	507	22	37	11	23	97	123	8	10
	(618)	(506)	(27)	(37)	(14)	(19)	(91)	(116)	(9)	(10)
1250	769 *	598 *	22 *	18 *	0 *	0 *	111 *	138 *	3 *	10 *
	769 *	538 *	11 *	24 *	0 *	0 *	134 *	137 *	6 *	8 *
	(769 *)	(568 *)	(17 *)	(21 *)	(0 *)	(0 *)	(123 *)	(138 *)	(5 *)	(9 *)
5000	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *	0 *
	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)	(0 *)
Judgement	＋	＋	＋	＋	－	－	＋	＋	－	－
Specific Mutagenicity	2230	1160	141	89.5			423	291		
Positive Control	AF-2 (593)	2-AA (1237)	NaN_3 (308)	2-AA (263)	AF-2 (308)	2-AA (1110)	AF-2 (350)	2-AA (443)	9-AA (1028)	2-AA (164)

* Growth inhibitation was observed.

Conc. μg/plate	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+
DMSO	(156)	(178)	(7)	(8)	(37)	(35)	(14)	(26)	(5)	(7)
9 .77	183 191 (187)		8 7 (8)				25 15 (20)			
19 .5	195 207 (201)		13 8 (11)		25 31 (28)	26 37 (32)	22 28 (25)			
39 .1	238 254 (246)	213 215 (214)	14 8 (11)	8 11 (10)	38 40 (39)	43 34 (39)	43 29 (36)	32 38 (35)	7 3 (5)	7 5 (6)
78 .1	355 368 (362)	232 262 (247)	18 17 (18)	16 11 (14)	48 60 (54)	54 68 (61)	46 31 (39)	45 49 (47)	3 5 (4)	7 3 (5)
156	434 432 (433)	350 360 (355)	26 24 (25)	17 14 (16)	26 43 (35)	54 53 (54)	84 81 (83)	69 59 (64)	3 6 (5)	5 3 (4)
313	599 524 (562)	501 486 (494)	21 28 (25)	17 32 (25)	39 25 (32)	40 39 (40)	106 98 (102)	114 106 (110)	5 6 (6)	7 5 (6)
625		695 709 (702)		24 32 (28)	15 * 9 * (12 *)	15 * 17 * (16 *)		157 170 (164)	7 3 (5)	5 7 (6)
1250		660 * 664 * (662 *)		22 * 29 * (26 *)	0 * 0 * (0 *)	0 * 0 * (0 *)		179 * 134 * (157 *)	3 * 7 * (5 *)	2 * 6 * (4 *)
Judgement	+	+	+	+	−	−	+	+	−	−
Specific Mutagenicity	2640	1010	141	54.3			563	268		
Positive Control	AF-2 (724)	2-AA (1188)	NaN_3 (295)	2-AA (238)	AF-2 (237)	2-AA (1078)	AF-2 (534)	2-AA (442)	9-AA (637)	2-AA (142)