SUMITOMO CHEMICAL

Safety Summary Sheet

1,3-bis (aminomethyl) benzene （CAS NO. 1477-55-0）

1,3-bis (aminomethyl) benzene （CAS NO.: 1477-55-0）		**SPECIES**	**PROTOCOL**	**RESULTS**
PHYSICAL-CHEMICAL				
2.1	Melting Point		Unknown	14.1 ℃
2.2	Boiling Point		Unknown	273 ℃ [1013hPa]
2.3	Density		Other: pycnometer Unknown	1.052 [20℃] 1.0502 [20℃ reference temperature 4℃]
2.4	Vapour Pressure		Unknown Unknown (Calculation)	20 hPa [145℃] 0.04 hPa [25℃]
2.5	Partition Coefficient (log Kow)		OECD TG 107	LogPow : ca.0.18 [25℃]
2.6.1A	Water Solubility		OECD TG 105	> 100000 mg/L [25℃]
2.6.1.B	Dissociation Constant （pKa）		OECD TG 112	pKa : ca.9.19 [25℃]
ENVIRONMENTAL FATE AND PATHWAY				
3.1.1	Photodegradation		Calculation by EUSES v.1.00 AOPWIN rate constant	Half-life : 5.39 hrs [OH concentration 5×10^{11} molecules/m^3]
3.1.2	Stability in Water		OECD TG 111	Stable at pH 4, 7 and 9 [50℃]
3.1.3	Stability in Soil			No data
3.2	Monitoring Data			No data
3.3.1	Transport between Environmental Compartments		Calculation by Fugacity Level III model	(100% to air) air : 0.215% Water : 38.576% Soil : 61.121% Sediment : 0.088% (100% to water) air : 4×10^{-5}% Water : 99.760% Soil : 0.012% Sediment : 0.228% (100% to soil) air : 0.005% Water : 36.138% Soil : 63.775% Sediment : 0.082%
3.3.2	Distribution (Koc etc.)			No data
3.4	Biodegradation	activated sludge, non-adapted activated sludge, non-adapted	OECD TG 301B and 92/69/EEC Method C.4-C OECD TG 302C (Modified	Not readily biodegradable (49% after 28 days) Not inherently biodegradable (Analysis by HPLC: 21%, BOD :

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			MITI(2))	22%, TOC : 6% after 28 days)
3.5	BOD-5, COD or BOD-5／COD ratio			No data
3.6	Bioaccumulation	*Cyprinus carpio*	OECD TG 305	BCF < 2.7
ECOTOXICOLOGY				
4.1	Acute Toxicity to Fish	*Oryzias latipes* *Leuciscus idus*	OECD TG 203 OECD TG 203	LC50 (96 h) : 87.6 mg/L LC50 (96 h) : 75 mg/L
4.2	Acute Toxicity to Aquatic Invertebrates (Daphnia etc.)	*Daphnia magna*	OECD TG 202	EC50 (48 h) : 15.2 mg/L
4.3	Toxicity to Aquatic Plants (Algae etc.)	*Selenastrum capricornutum* *Scenedesmus subspicatus*	OECD TG 201 OECD TG 201	EbC50 (0-72h) : 20.3 mg/L NOECb (0-72h) : 10.5 mg/L EbC50 (0-72h) : 12 mg/L NOECb(0-72h) : 6.25 mg/L
4.4	Toxicity to Microorganisms (Activated Sludge Respiration Inhibition test etc.)	*Pseudomonas putida*	ISO 10712 and Bewertung Wassergefahorden der Stoffe LTWS-Nr10	EC50 (16 h) : 130 mg/L
4.5.1	Chronic Toxicity to Fish			No data
4.5.2	Chronic Toxicity to Aquatic Invertebrates	*Daphnia magna*	OECD TG 211	NOEC (21 d) : 4.7 mg/L (Reproduction) LOEC (21 d) : 15 mg/L (Parental daphnia)
4.6	Toxicity to Terrestrial Organisms			No data
4.6.1	Toxicity to Sediment Dwelling Organisms			No data
TOXICOLOGY				
5.1	Toxicokinetics, Metabolism and Distribution			No data
5.2	Acute Toxicity			
A.	Acute Oral Toxicity	Rat	OECD TG 401	LD_{50} : male ; 1090 mg/kg female ; 980 mg/kg
B.	Acute Inhalation Toxicity	Rat	84/449/EEC, B.2 similar to OECD TG 403	LC_{50} : male ; > 1.42 mg/L female ; 0.8 mg/L
C.	Acute Dermal Toxicity			No data
D.	Acute Toxicity, Other Routes			No data
5.3	Irritation/Corrosion			
A.	Skin Irritation/Corrosion	Rat	Similar to 84/449/EEC B.4	Corrosive

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B.	Eye Irritation/Corrosion			No data
5.4	Skin Sensitization	Guinea pig	92/69/EEC, B.6 Maximization test	sensitizing
5.5	Repeated Dose Toxicity	Rat Rat	CSCL of Japan* (oral gavage, 28 days) OECD TG 421 (oral gavage)	NOEL : 150 mg/kg/day NOAEL : 50 mg/kg/day
5.6	Genetic Toxicity in vitro			
A.	Gene Mutation (Bacterial Test etc.)	*S. typhimurium* and *E. coli*	CSCL of Japan*	Negative
B.	Chromosomal Aberration	CHO cells	OECD 473 67/548/EEC, B10 EPA (TSCA, FIFRA),§798.5375	Negative
5.7	Genetic Toxicity in vivo	Mouse	OECE TG 474 （oral gavage, Micronucleus assay）	Negative
5.8	Carcinogenicity			No data
5.9	Toxicity to Reproduction			
A.	Toxicity to Fertility	Rat	OECD TG 421 (oral gavage)	NOEL : Parental male ; 50 mg/kg/day female ; 150 mg/kg/day Pups ; 450 mg/kg/day Reproductive ; 450 mg/kg/day
B.	Developmental Toxicity/Teratogenicity			See 5.9 A.
5.10	Other relevant information			No data
5.11	Experience with Human Exposure	Workers exposed to epoxy resin containing 1,3-bis (aminomethyl) benzene	Patch test	Incidence rate of allergic contact dermatitis (ACD) was 4.5/1000、and positive reaction in patch test was seen in 40% of tested workers with ACD

* : Testing guidelines for Japanese Chemical Substances Control Law

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