

Safety Summary Sheet

1-hexene (CAS NO. 592-41-6)

1-hexene NO.: 592-41-6	(CAS	SPECIES	PROTOCOL	RESULTS
PHYSICAL-CHEMICAL				
2.1	Melting Point		Unknown	-139 – -140 °C
2.2	Boiling Point		Unknown	63.3 °C (1010 hPa)
2.3	Density		Unknown	0.673 – 0.683 g/cm ³
2.4	Vapour Pressure		Unknown	186.5 hPa (20 °C)
2.5	Partition Coefficient (log Kow)		Unknown	3.39 (20 °C)
2.6.1A	Water Solubility		Unknown	50 mg/l (20 °C)
2.6.1.B	Dissociation Constant (pKa)			No data (no dissociable groups)
ENVIRONMENTAL FATE AND PATHWAY				
3.1.1	Photodegradation		Calculation by USEPA EPIWIN model	Half life with OH ⁻ : 4.2 h
3.1.2	Stability in Water			No data
3.1.3	Stability in Soil			No data
3.2	Monitoring Data			No data
3.3.1	Transport between Environmental Compartments		Calculation by Mackay Level III Fugacity model	Air : 21% Water : 77% Soil : <1% Sediment : 2% (10 kg/h to air, 1 kg/h to water, 0 kg/h to soil)
3.3.2	Distribution (Koc etc.)			No data
3.4	Biodegradation		OECD TG 301C	BOD degradation : 67 - 98 % (28 d)
3.5	BOD-5, COD or BOD-5/ COD ratio			No data
3.6	Bioaccumulation			No data
ECOTOXICOLOGY				
4.1	Acute Toxicity to Fish	<i>Oncorhynchus mykiss</i>	Unspecified (96 h semi-static toxicity test)	LC ₅₀ (96h) : 5.6 mg/l
4.2	Acute Toxicity to Aquatic Invertebrates (Daphnia etc.)			No data
4.3	Toxicity to Aquatic Plants (Algae etc.)	<i>Selenastrum capricornutum</i>	Unspecified (4 d growth experiment)	EC ₀ (96h) : 22 mg/l
4.4	Toxicity to Microorganisms (Activated Sludge Respiration Inhibition test etc.)			No data
4.5.1	Chronic Toxicity to Fish			No data
4.5.2	Chronic Toxicity to Aquatic Invertebrates			No data
4.6	Toxicity to Terrestrial Organisms			No data

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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	LD50 : >5600 mg/kg
B.	Acute Inhalation Toxicity	Rat	Unknown	LC50 : 32000 ppm
C.	Acute Dermal Toxicity	Rabbit	OECD TG 402	LD50 : >2000 mg/kg
D.	Acute Toxicity, Other Routes			No data
5.3	Irritation/Corrosion			
A.	Skin Irritation/Corrosion	Rabbit	OECD TG 404	Mildly irritating
B.	Eye Irritation/Corrosion	Rabbit	OECD TG 405	Mildly irritating
5.4	Skin Sensitization	Guinea pig	OECD TG 406 (Buehler test)	Not sensitizing
5.5	Repeated Dose Toxicity	Rat	OECD TG 413 (inhalation, 13 wks)	NOEL : 1000 ppm
		Rat	OECD 407 (oral gavage, 28 days)	NOEL : 101 mg/kg/day
5.6	Genetic Toxicity in vitro			
A.	Gene Mutation (Bacterial Test etc.)	<i>S. typhimurium</i> Mouse Lymphoma L51784	OECD TG 471 Unknown	Negative Negative
B.	Chromosomal Aberration	CHO	OECD TG 473	Negative
5.7	Genetic Toxicity in vivo	Mouse	OECD TG 474 (inhalation, micronucleus assay)	Negative
5.8	Carcinogenicity			No data
5.9	Toxicity to Reproduction			
A.	Toxicity to Fertility	Rat	Similar to OECD TG 421 (inhalation)	NOEL : Parental. male ; <100 mg/kg/day female ; 1000 mg/kg/day Pups ; 1000 mg/kg/day Reproductive ; 1000 mg/kg/day
B.	Developmental Toxicity/Teratogenicity			See 5.9 A
5.10	Other relevant information	Rat hepatocyte	OECD TG 482 (UDS assay)	Negative
5.11	Experience with Human Exposure			No data

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