

Tris(2-ethylhexyl)trimellitate [3319-31-1]

Results of Testing

Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
Tris(2-ethylhexyl)-trimellitate	3319-31-1	EECTOX Chronic aquatic toxicity	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	<i>Daphnia magna</i>	flow-through; 21 days (life-cycle)	7.4, 12, 27, 48, 100 µg/L (nominal)	Not specified	Analysis of survival after a 21 day exposure with the test material showed that there was no significant difference between the treated and the control groups. Survival rates in the study ranged from 90 to 100%.	51 FR 6468; 2/24/86 OTS0510635
Tris(2-ethylhexyl)-trimellitate	3319-31-1	EFANAL Analytical validation	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	Not applicable	GC analysis; deionized water, stream water, octanol	0.35-1049 µg/L (deionized), 3.50-104.9 µg/L (stream), 0.0104- 10.0 µg/L (octanol)	Not applicable	Results of the method validation study for the test material in deionized water showed a mean recovery of 99 ± 5.0%. Mean recovery of test material in stream water was calculated at 93 ± 3.5%. In octanol, the mean recovery was 97 ± 2.2%.	51 FR 6468; 2/24/86 OTS0510634
Tris(2-ethylhexyl)-trimellitate	3319-31-1	EFBDEG Biodegradation study	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	Not applicable	28 days, shake flask	0.26 mg equivalents/L	Not applicable	The half-life for ultimate degradation was greater than 28 days, and for primary degradation, less than 28 days.	51 FR 16203; 5/1/86 OTS0510640
Tris(2-ethylhexyl)-trimellitate	3319-31-1	EFPCHEPART Octanol/water coefficient	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	Not applicable	octanol/deionized water at 25 °C	0.04% (v/v)	Not applicable	The log P value for the test material was 4.35.	51 FR 16203; 5/1/86 OTS0510638
Tris(2-ethylhexyl)-trimellitate	3319-31-1	EFPCHEWSOL Water solubility	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	Not applicable	deionized water, equilibrated for 24 hr at 25 ± 2 °C	Not applicable	Not applicable	Water solubility was 0.385 ± 0.0404 ppb.	51 FR 6468; 2/24/86 OTS0510634
Tris(2-ethylhexyl)-trimellitate	3319-31-1	HEADME Adsorption and metabolism test	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	rats	oral (gavage), single dose	100 mg/kg/body wt	Not specified	Approximately 75% of the dose was excreted unchanged in the feces, with 16% of the test material found in the urine and 1.9% was expired as ¹⁴ CO ₂ . Radioactivity was excreted in the feces as unchanged tris(2-ethylhexyl)trimellitate (TEHT) (constituting 85% of the fecal radioactivity), mono-(2-ethylhexyl) (MEHT), and di-(2-ethylhexyl) trimellitate (DEHT), and as unidentified polar metabolites. Metabolites in the urine were identified as MEHT and metabolites of 2-ethylhexanol. Less than 0.6% of the dose remained in the tissues. Elimination of ¹⁴ CO ₂ was biphasic with half-lives of 4.3 and 31 hours. Excretion of radioactivity in the urine was biphasic with half-lives of 3.4 and 42 hours.	50 FR 5421; 2/6/85 OTS0507501
Tris(2-ethylhexyl)-trimellitate	3319-31-1	HEGTOXDNAF Unscheduled DNA synthesis	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	rats, primary hepatocytes	<i>in vitro</i>	0, 250, 500, 1000, 2500, 3000, 4000, 5000 nL/mL	Not specified	None of the test concentrations caused a significant increase in unscheduled DNA synthesis over the solvent (ethanol) control.	50 FR 31919; 8/7/85 OTS0508501
Tris(2-ethylhexyl)-trimellitate	3319-31-1	HEGTOXDNAF Unscheduled DNA synthesis	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	rats, primary hepatocytes	<i>in vitro</i>	0, 250, 500, 1000, 2500, 3000, 4000, 5000 nL/mL	Not specified	None of the test concentrations caused a significant increase in unscheduled DNA synthesis over the solvent (ethanol) control.	51 FR 27598; 8/1/86 OTS0510641

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Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
Tris(2-ethylhexyl)-trimellitate	3319-31-1	HEGTOXMUTA Mutations in dosed rat urine	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	rats	oral (gavage); 15 days	2000 mg/kg/d	Unreported number of males	Urine from rats dosed with test material was evaluated in Salmonella tester strains (TA98, TA100, TA1537, and TA1528) both in the presence and absence of Aroclor-induced rat liver S9 metabolic activation. Tests performed with pure test material were negative in the presence and absence of activation. The urine of rats treated with test material did not cause a positive response under any of the test conditions.	51 FR 6468; 2/24/86 OTS0206391
Tris(2-ethylhexyl)-trimellitate	3319-31-1	HEGTOXMUTA Gene mutations	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	CHO/HGPRT	<i>in vitro</i>	5, 10, 20, 50, 100, 200 nL/mL	Not applicable	The test material did not induce dose-related increases in the mutation frequency relative to the solvent control (aqueous ethanol) in any of the tests. Preliminary cytotoxicity tests showed that the test material was not toxic to CHO cells at concentrations up to 5000 nL/mL with or without metabolic activation.	50 FR 46699; 11/12/85 OTS0510642
Tris(2-ethylhexyl)-trimellitate	3319-31-1	HESTOX Subchronic toxicity	Non-TSCA Protocol/ Guideline (docket OPTS-42040)	rats	oral (gavage); 5d/wk; 4wks	0, 1000 mg/kg/d	5 males	There were no statistically significant differences between the treated and the control test animals in the following areas: mortality, body weight, absolute and relative liver weights, clinical signs of toxicity, and gross necropsy findings. There was, however, a significant decrease in triglyceride values between the control and treated groups.	51 FR 6488; 3/24/86 OTS0507501