



## MAMMALIAN TOXICOLOGY OF LINEAR ALKYL BENZENE SULFONATES (LAS)

### Applicable to these current Stepan products:

BIO-SOFT® D-40 BIO-SOFT® S-101 BIO-SOFT® S-118 NACCONOL® 90G STEPWET® DF-90 BIO-SOFT® L2 P-123	BIO-SOFT® N-300 BIO-SOFT® S-101 LS BIO-SOFT® S-120 POLYSTEP® A-15-30K STEPANTAN® DT-60	BIO-SOFT® N-411 BIO-SOFT® S-111 H NACCONOL® 40G POLYSTEP® LAS-50 BIO-SOFT® D-62 LT
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### Applicable to these inactive Stepan products:

BIO-SOFT® D-53 POLYSTEP® A-4 POLYSTEP® A-15K	BIO-SOFT® S-100 POLYSTEP® A-7	BIO-SOFT® S-130 STEPANTAN® DS-40
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### Toxicological Information:

<u>Test/Conditions</u>	<u>Results/Classification</u>	<u>References</u>
Acute Oral Toxicity (rat) (14 day) n=5/sex/dose	LD50 >1000 mg/kg bw (moderately toxic orally)	ECHA REACH Dossier <sup>1</sup>
Acute Dermal Toxicity (rabbit) (14 day) n=5/sex/dose	LD50 > 2000 mg/kg bw (slightly toxic dermally)	ECHA REACH Dossier
Primary Skin Irritation (rabbit) (4-hr exposure) n=3	Moderately irritating to skin @ 47% active	ECHA REACH Dossier
Dermal Sensitization (guinea pig maximization test)	Not a dermal sensitizer	ECHA REACH Dossier
Primary Eye Irritation (rabbit) n=9	Severely irritating to eyes @ 47% active	ECHA REACH Dossier
Subchronic Oral Toxicity (rat) (diet) (13 weeks) n=8/sex/dose	NOAEL = 85 mg/kg bw/day	ECHA REACH Dossier

doses: 85, 145, 300, 900 mg/kg bw/day		
Reproductive Toxicity Study (rat) (gavage) n=50/sex/dose doses: 14, 70, 350 mg/kg bw/day	NOAEL (P0) = 350 mg/kg bw/day NOAEL (P1) = 350 mg/kg bw/day NOAEL (F2) = 350 mg/kg bw/day	ECHA REACH Dossier
Developmental Toxicity Study (rat) (gavage) n=20 females/dose doses: 0.2, 2, 300, 600 mg/kg bw/day	NOAEL = 600 mg/kg bw/day	ECHA REACH Dossier
Mutagenicity Study (In vitro & in vivo)	Non-mutagenic	ECHA REACH Dossier

#### Discussion:

The general problem associated with accidental ingestion of detergents (including LAS) has been widely studied using data reported by Poison Control Centers both in the U.S. and Europe. In most of these instances, very few cases resulted in any symptoms and there were no fatalities. Therefore, evaluation of the extensive safety data available on mammalian toxicity as indicators of human safety, as well as actual human exposure, agrees with the view that the use of LAS in consumer products does not represent a hazard to human safety.

#### References:

1. ECHA REACH dossier for Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts (EC no. 270-115-0, CAS RN 68411-30-3).

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