

<<<<<<< ENVIRONMENTAL EVALUATION FILE REPORT >>>>>>>
Health & Environmental Sciences T.I.M.E. SYSTEM

PAGE
03/26/9

DR-0267-9698

ETHYLENE DIBROMIDE 90

REPT E

REVISED: 10/24/89

OTHER IDS:
SYNONYMS: ETHYLENE DIBROMIDE 90
COMPOSITION:

92.5% DR-0001-5872ETHYLENE DIBROMIDE
7.5% DR-0011-8343STODDARD SOLVENT

FORMULA:
MOLECULAR WT:

This report is designed for use only by those authorized for input
("update clearance") to the T.I.M.E. databases.

PROPERTIES

APPEARANCE: light yellow clear liquid

MELTING POINT:

SPECIFIC GRAVITY: 2.0

BOILING POINT: 130C

PH:

VAPOR PRESSURE: 11.6 mmHg @ 20C

ODOR DESCRIPTION: sweet, nauseating

SOLUBILITY: insoluble in water

CHEMICAL FATE INFORMATION

MOVEMENT & PARTITIONING

Please also see the two major ingredients of this product: ethyl ne dibromide, DR-0001-5872, and Stoddard solvent, DR-0011-8343. BIOTA: The log octanol/water partition coefficient for EDB has been reported to be 1.96 (antilog = 91.2) suggesting very little potential for bioconcentration of biomagnification (R-1).

DEGRADATION & PERSISTENCE

Please also see the two major ingredients of this product: ethylene dibromide, DR-0001-5872, and Stoddard solvent, DR-0011-8343.

CHEMICAL: Hydrolysis rate constants for the active ingredient were measured under carefully controlled conditions and half-life was calculated at pH 7 and at 25 C to be 8 years (R-6).

ES2020 20-Day biochemical oxygen demand (BOD20) is below detectable limits for EDB.

ES2040 Theoretical oxygen demand (ThOD) is calculated to be 0.43 p/p for EDB.

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REPT E2

ECOTOXICOLOGICAL INFORMATION

AQUATIC

Please also see the two major ingredients of this product: ethylene dibromide, DR-0001-5872, and Stoddard solvent, DR-0011-8343. In tests @ 0.5-2.0 mg/L of EDB, no statistically significant decrease in photosynthesis was seen in estuarine phytoplankton (R-3). It is not expected that this product will behave toxicologically appreciably different than the pure active ingredient.

- ES3011 Acute LC50 for emerald shiner (*Notropis atherinoides*) is 40.3 mg/L of EDB.
ES3102 Material is slightly toxic to fish on an acute basis (LC50 between 10 and 100 mg/L).

ENVIRONMENTAL ASSESSMENT

Please also see the two major ingredients of this product: ethylene dibromide, DR-0001-5872, and Stoddard solvent, DR-0011-8343.

REGULATORY INFORMATION

It is the responsibility of the person handling a material to comply with applicable federal, state, and local laws and regulations which are increasingly site- and chemical-specific and may not be included here. Changes occur frequently so current status should always be confirmed.

Please also see the two major ingredients of this product: ethylene dibromide, DR-0001-5872, & Stoddard solvent, DR-0011-8343. EPA has approved an analytical method for satisfying RCRA requirements under 40 CFR Parts 264 & 270 (R-8).

ES7240
ES7180
ES7204

DETECTION

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INSTRUMENTAL: Portable infrared vapor detectors run at 8.6 um wavelength on a 20.25 m pathlength through directly-sampled ambient air can have detection limits down to 0.6 ppm of the active ingredient (R-9). A GC-MS capillary column method has been validated for detection of EDB in mixed liquid wastes to an estimated detection limit (EDL) of 3.0 ug/L over a conc range of 3.0-550 ug/L w/ a calculated method detection limit (MDL) of 0.2 ug/L & a non-detection limit of 1.0 ug/L (R-8).

REFERENCES

R-1 ES 0006

R-2 ES 0018

R-3 Erickson, S.J., et.al., BULL.ENV.CONTAM.TOX.24:910-915, 1980, in K-1715-(100).

R-4 USEPA-RCRA. 40 CFR, Part 261, Appendix VIII.

R-5 USEPA-TSCA. 1988. Federal Register 53 (115): 22300-22325, June 15.

R-6 Ellington, J.J., et.al, Measurements Of Hydrolysis Rate Constants For Evaluation Of Hazardous Waste Land Disposal. Vol. 3, EPA 600/3-88/028, 1988

R-7 SUSPECT Database, Roytech Publications, 1988.

R-8 Yancey, M.F., R.A. Kornfeld, & J.S. Warner. 1988. Cap column GC-MS deter of 77 org comp in liq wastes. USEPA, EMSL, Cincinnati, OH. EPA/600/4-88/030: 68pp.

R-9 Foxboro. 1986. OSHA conc limits for gases... The Foxboro Co., Foxboro, MA 02035. No. 03/86 15M PUB-522B (data for MIRAN series IR analyzers).

END OF REPORT; FOR ADDITIONAL INFORMATION CONTACT:

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