

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

APR 1 1994

MEMORANDUM

SUBJECT Picloram Triisopropanolamine (TIPA) Salt Reregistration. List A Chemical No. 005102; Case No. 0096. DowElanco: Response to The Picloram, Salts and Ester Product Chemistry Data Requirements Regarding the Solubility (GLN No. 63-8) of Picloram (TIPA) Salt. (MRID No. 430278-01; CBRS # 12957; DP BARCODE: D197439)

FROM: Freshteh Toghrol, Ph.D., Chemist Reregistration Section II Chemistry Branch II: Reregistration Support Health Effects Division (7509C) *F. Toghrol*

THRU: William J. Hazel, Ph.D., Section Head Reregistration Section II Chemistry Branch II: Reregistration Support Health Effects Division (7509C) *W.J. Hazel*

TO: Lois Rossi/W. Waldrop, PM 71 Reregistration Branch Special Review and Reregistration Division (7508W)

DowElanco has submitted product chemistry data (430278-01) on the solubility of Picloram triisopropanolamine (TIPA) TGAI to support reregistration of picloram TIPA products.

The solubility of Picloram Triisopropanolamine salt (TIPA) TGAI was determined in organic solvents (methanol, acetonitrile, acetone, and hexane). The test substance used for this study was Picloram TIPA TGAI, Batch No. TSN100212, with a 91.3% purity. The Picloram TIPA used as an analytical standard was Lot No. AGR221371, with a 99.4% purity. The solubility in each solvent was determined using the shake-flask methodology, which involves adding excess picloram TIPA to each solvent and allowing it to equilibrate for 24, 48, and 72 hours at 30 °C with agitation. Then samples from each of the

①

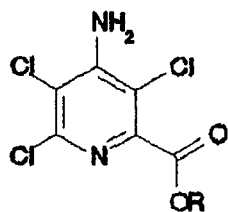
three time intervals were allowed to equilibrate for 24 hours at 20 °C with agitation for 23 hours followed by one hour without agitation. The samples were removed and analyzed using reversed-phase HPLC and an external standard.

Solvents	Solubility (at 20 °C; g/100 ml)
Water	Not reported
Acetone	6.95
Methanol	56.8
Acetonitrile	1.40
Hexane	<10 ppm

CBRS Conclusions Regarding the Picloram Triisopropanolamine Salt (TIPA) TGAI:

The data regarding solubility (GLN No. 63-8) for picloram TIPA TGAI salt is incomplete. Data for solubility in water are required.

PICLORAM (TRIIISOPROPANOLAMINE, ISOCTYL ESTER, AND POTASSIUM SALT)



R = NH[CH₂CH(OH)CH₃]₃; Shaughnessy No. 005102.

R = C₈H₁₇; Shaughnessy No. 005103

R = H; Shaughnessy No. 005101.

R = K; Shaughnessy No. 005104.

cc: Picloram S.F., R.F., F. Toghrol, Reg. Std. File, Circ.
 RDI: W. Hazel (3/30/94): M. Metzger (3/31/94): E. Zager (3/31/94)
 H7509C:CBRS:F.Toghrol:F.T.:RM:804B:CM#2:(703)305-7887:8/27/93.