List B File

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

DEC 12, 1995

DEC 12 '95

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

Subject: Product Chemistry for **Thiobencarb**.
Chemical No. 108401 Case No. 2665
Registration No. 62499-18
GLN's 61, 62, and 63
MRIDs 41609001, 41609002, 41609003, 00140158, and 00044507
DP Barcode D221503 CB #16591

From: Steven A. Knizner
Special Review Section I
Chemistry Branch II - Reregistration Support
Health Effects Division (7509C)

Through: Andrew Rathman, Section Head
Special Review Section I
Chemistry Branch II - Reregistration Support
Health Effects Division (7509C)

To: Paul Lewis, PM Team 51
Special Review and Reregistration Division (7505C)

Recommendation

The submitted studies adequately address Guideline 61, 62, and 63 data requirements for Chevron Bolero Technical (Thiobencarb, TGAI, 97.4%), EPA Reg. No. 62499-18.

A detailed review follows in tabular format.

cc: S.F., circ., R.F., List B File, S.Knizner
RDI: A.Rathman, 12/7/95 R.Perfetti, 12/7/95 E.Zager, 12/8/95
H7509C:CBRS:CM#2:305-6903:SAK:sak:thiobenc.prd:12/6/95

REVIEW OF PRODUCT CHEMISTRY (SUBDIVISION D), GLN'S 61 TO 63

Table 1: Manufacturing and Impurity Data for Thiobencarb, Chevron Bolero Technical (97.4%), EPA Reg. No. 62499-18[1].

GLN	MRID	Status[2]	Deficiency
61-1: Product Identity & Disclosure of Ingredients	41609001	A	
61-2: Starting Materials & Manufacturing Process	41609001	A	
61-3: Discussion of Impurities	41609001	A	
62-1: Preliminary Analysis	41609002	A	
62-2: Certification of Limits	41609002 41609010	A	
62-3: Analytical Methods	41609001 41609010	A	

[1] For example, test substance might be PAI and product might by 95% technical MP.
[2] A = Acceptable. N = Unacceptable (see Deficiency).

Table 2: Physical and Chemical Properties for Thiobencarb, Chevron Bolero Technical (97.4%), EPA Reg. No. 62499-18.			
GLN	MRID	Status[1]	Result[2] or Deficiency
63-2: Color	00140158 41609003	A	Pale yellow, Munsell Color Designation 5Y 9/4
63-3: Physical State	00140158 41609003	A	Liquid
63-4: Odor	00140158 41609003	A	Pungent bitter almond odor
63-5: Melting Point		N/A	Not required, technical is liquid at room temperature
63-6: Boiling Point	00140158	A	126-129 C at 0.008 mm Hg
63-7: Density, Bulk Density, or Specific Gravity	41609003	A	Density is 1.164 g/mL at 20 C
63-8: Solubility	00140158	A	27.5 ppm in H_2O at 20 c, miscible with hexane, benzene, toluene, ethyl ether, methylene chloride, ethyl acetate, acetone, acetonitrile, ethanol and methanol.
63-9: Vapor Pressure	00140158	A	$2.2x10^{-5}$ mm Hg at 23 C
63-10: Dissociation Constant		N/A	
63-11: Octanol/Water Partition Coefficient	00044507	A	20 to 42 using concentrations from 0.0276 to 2.47 mg/mL
63-12: pH	41609003	A	pH = 5.7
63-13: Stability	00140158 41609003	A	Negligible decomposition during 168 hours of heating at 100 C. Stable to 333 C by differential scanning calorimetry under nitrogen atmosphere
63-14: Oxidizing or Reducing Action	41609003	A	TGAI is chemically compatible with common oxidizing and reducing agents, no significant temperature increase or observable reaction was detected when reacted with 0.1N $KMnO_4$ or zinc powder.
63-15: Flammability	41609003	A	Flash point is over 212 F (close cup).
63-16: Explodability	41609003	A	Not explosive
63-17: Storage Stability		N/A	
63-18: Viscosity	41609003	A	40.8 cps at 20 C
63-19: Miscibility		N/A	
63-20: Corrosion Characteristics		N/A	

[1] A = Acceptable; N = Unacceptable (see Deficiency); N/A = Not applicable.
[2] For example, "brown" for 63-1; "155° C" for 63-4.