

US EPA ARCHIVE DOCUMENT

DATE: 19/DEC/2001

SUBJECT: PRODUCT CHEMISTRY REVIEW OF MP [] EP [X]
DP BARCODE No.: D277980 REG./File Symbol No.: 56077-60
PRODUCT NAME: Pendimethalin Technical
COMPANY: Cedar Chemical Corporation

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12-19-01

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INTRODUCTION

The registrant has submitted (on April 26, 2001) the final report on the determination of volatile N-nitrosamines in two representative batches of technical grade Pendimethalin. These data should be included as a supplement to Volume II of the submission dated August 4, 2000, for an alternate source of Pendimethalin technical for Cedar Chemical Corporation. The report is submitted under MRID No. 454146-01. The study was performed at Uniroyal Chemical Co., facility located in Guelph, Canada. The study was conducted under standard GLP requirements in compliance with 40CFR §160.

SUMMARY OF FINDINGS

1. The study was conducted to determine the following volatile N-nitrosamines in two representative batches of TGAI Pendimethalin:

N-Nitrosodi-n-butylamine (NDBA), N-nitrosodiethylamine (NDEA), N-nitrosodimethylamine (NDMA), N-nitrosodi-n-propylamine (NDPA), N-nitrosomorpholine (NMOR), N-nitrosopiperidine (NPIP), and N-nitroso-pyrrolidine (NPYR).

2. Initial analysis of two representative batches of technical pendimethalin and after 99 days of storage in the dark at ambient temperature by GC/TEA showed no response in the region of the following nitrosamine: NDBA, NDEA, NDMA, NDPA, NMOR, NPIP, & NPYR.

3. GC/TEA analysis of samples spiked with 2.5 and 12.5 ppm (of each component) demonstrated that the instrument was working properly and the amount of the target nitrosamine in the sample were less than 1. ppm level.

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4. The analysis was performed on a HP 5890 Series II GC connected to a Thermedics TEA Model 610 Nitrogen analyzer. The identity and elution order of the components of the reference solution was confirmed by GC/MS. The 25 ppm stock reference solution was analyzed on a HP 5890 Series II GC connected to HP 5971 Mass Selective Detector using similar column and GC conditions.

CONCLUSION:

The TRB has reviewed the data submitted on the analysis of Pendimethalin for volatile N-nitrosamines and has concluded that:

1. Initial analysis of the test substance and analysis after 99 days in the dark at ambient conditions by GC/TEA showed no responses in the region of the target nitrosamines. The test samples spiked with 2.5 and 12.5 ppm (of each component) demonstrated that the instrument was working properly and the amount of any of the target nitrosamines in the sample was less than the 1ppm level.
2. The data submitted corresponding to guideline reference 830.1700 (Preliminary analysis) satisfy the data requirements of 40CFR§158.170 and are acceptable.

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The elution order of the peaks was determined by GC/MS analysis of the 25 ppm(per component)stock reference solution. The elution order of the peaks is:

NDMA
NEMA
NDEA
NDPA
NPYR & NMOR
NPIP
NDBA
NDFA

PRODUCT CHEMISTRY DATA (SERIES 830 Subgroup A & Subgroup B)

14. Chemical IDs/Manufacture/ Analytical Information New Guideline:830.--	Data Required Fulfilled	MRID No.
1550. Chemical Identity(CSF)	Y	451874-01
1600. Beginning Materials 1620. Formulation Process	Y	"
1670. Discussion of Impurities	Y	"
1700. Preliminary Analysis	Y	"
1750. Certified Limits(CSF)	Y	"
1800. Enforcement of Anal. Method	Y	"

15. Physical/Chemical Properties New Guideline No. 830.---	Data Required Filled ?	Value or Qualitat. Descrip.	MRID No.
7050. UV/Visible	Y	240 nm	451874-01
7200 Melting Range	Y	54 - 58 C	"
6303. Physical State	Y	Solid, Orange Yellow, Odorless	451874-01
6305. Temperature Stability Metal Stability Metal Salt Stability (Iron, Aluminum and their Acetates, respectively)	Y	All Stable for 14 days at 54 C	"
7300. Density/Bulk Density	Y	9.76 lbs/gal on CSF 1.19 at 25 C in MRID	"
7000. pH	Y	7.0	"
6315. Flamm.-Flsh Pt., Flame Exten.	NA	Not flammable, as reported	
6316. Explodability	NA	Not explosive, as reported	
7550. Partition Coefficient (n- Octanol Water)	Y	152,000	

7840. Solubility	Y	...	
Water		0.3mg/l	20 C
Acetone		700 g/L	26 C
Xylene		628 g/L	26 C
Heptane		138 g/L	26 C
Isopropanol		77 g/L	26 C

Explanations: Y = The Requirements Were Fulfilled; N = The Requirements Were Not Fulfilled; NA = Not Applicable; G = Data Gap; U = Requires Upgrading; I = Incomplete or In Progress; W = Waived.

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Pages 7 through 9 are not included in this copy.

The material not included contains the following type of information:

- Identity of product inert ingredients.
- Identity of product impurities.
- Description of the product manufacturing process.
- Description of quality control procedures.
- Identity of the source of product ingredients.
- Sales or other commercial/financial information.
- A draft product label.
- The product confidential statement of formula.
- Information about a pending registration action.
- FIFRA registration data.
- The document is a duplicate of page(s) _____.
- The document is not responsive to the request.
- Proprietary information pertaining to the chemical composition of an inert ingredient provided by the source of the ingredient.
- Attorney-Client Privilege.
- Claimed Confidential by submitter upon submission to the Agency.
- Internal Deliberative Information.

* The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.
