

US EPA ARCHIVE DOCUMENT

9-19-85 R.F.



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

SEP 19 1985

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MANUFACTURING PROCESS INFORMATION IS NOT INCLUDED

MEMORANDUM

SUBJECT: Chlorpyrifos. Response to Data Gaps in Product
Chemistry (I.D. No. 464-381, EPA Acc. No. 257597,
RCH 4930)

FROM: Gobind P. Makhijani, Chemist
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TO: Amy Rispin,
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and

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THRU: George Beusch, Section Chief *G.J. Beusch*
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Hazard Evaluation Division (TS-769C)

The Dow Chemical USA has submitted additional product chemistry data for a manufacturing-use product (Dursban MC) EPA Registration No. 464-381 in response to data gaps in the re-registration guidance document. Our comments on these data are as follows:

61-1 - Product Identity and Disclosure of Ingredients

Dursban MC is a manufacturing-use concentrate made from [redacted] its composition is listed under Confidential Appendix A.

No further information is required for this topic.

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PRODUCT INGREDIENT INFORMATION IS NOT INCLUDED

PRODUCT INGREDIENT SOURCE INFORMATION IS NOT INCLUDED

61-2 - Description of Beginning Materials and Manufacturing Process.

The registrant has submitted:

A description of beginning materials for Dursban MC (page 4) and for [REDACTED]

A description of the manufacturing process for Dursban MC (pages 4 and 5) and for [REDACTED]

[REDACTED] this information is considered to be adequate for this product, and nothing further is required for this topic.

61-3 - Discussion of the Formation of Impurities

Because Dursban MC is [REDACTED]

[REDACTED] A listing of these impurities is included in the description of the solvent as a beginning material under §61-2 above. With this information and that on [REDACTED]

[REDACTED] it is possible to very simply estimate the impurities present in Dursban MC. This is done in Confidential Appendix A and no further information is required, except that a previous data gap involving an impurity in [REDACTED] now applies to Dursban MC as well.

62-1 - Preliminary Analysis of Product Samples

The registrant has submitted analyses of five production batches of Dursban MC. The percentage of active ingredient (chlorpyrifos) alone has been determined [by Analytical Method 26018C (QA Number 1672)]. [REDACTED]

No data have been submitted which would confirm our estimates of the quantities of individual impurities which may be present in Dursban MC. Therefore, a preliminary analysis will be required for this product. This analysis should include a further impurity which gives us cause for concern, and which is described in Confidential Appendix A. This is a data gap.

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MANUFACTURING PROCESS INFORMATION IS NOT INCLUDED

62-2 - Certification of Limits

The registrant has certified the upper [REDACTED] and lower [REDACTED] limits for the active ingredient, and the upper limits for the intentionally added ingredients and impurities [page 11] (See Confidential Appendix A). He has also certified a combined upper limit of [REDACTED] for the inerts carried into Dursban MC with [REDACTED]

Except for the possible need for a certified limit for the impurity discussed in Confidential Appendix A, nothing more is required for this topic.

62-3 - Analytical Methods to Verify the Certified Limits

The registrant has submitted Analytical Method 26018C (QA Number 1672) entitled "Dursban MC Insecticide." This method is based on liquid chromatography for the active ingredient alone [pages 13-20]. The percentage of inert ingredients plus solvent is calculated by difference. The method has been validated by the registrant for its intended purpose. However, because it does not determine the impurities carried into Dursban MC, a data gap still exists here.

63-2 to 63-20 - Physical and Chemical Characteristics

The physical and chemical characteristics for Dursban MC, manufacturing-use concentrate, minimum 52.5% chlorpyrifos (Registration No. 464-381) are as follows:

63-2	Color	Straw Colored
63-3	Physical State	Liquid
63-4	Odor	Methylene chloride and mercaptan
63-7	Specific Gravity	1.38 at 20 °C by ASTM D-1298
63-12	pH	N/A
63-14	Oxidizing/Reducing Activity	None
63-15	Flash point	None
63-16	Explosibility	None
63-17	Storage Stability	1 year at 25 °C in resin-lined drum
63-18	Viscosity	1.68 cps at 25 °C by ASTM D-445
63-19	Miscibility	N/A
63-20	Corrosion	Noncorrosive to low carbon or stainless steel. Corrosive to aluminum, brass and copper.

QUALITY CONTROL PROCEDURE INFORMATION IS NOT INCLUDED

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No data gaps exist in physical and chemical characteristics.

Attachment 1: Table B
Attachment 2: Confidential Appendix A
(Copies of Attachment 2 to: Chitlik, TOX; Ellenberger, RD;
Heusch, RCH.)

cc: SF
Makhijani
RS file.

Edited by:wh:9/20/85
HED/RCH:JOB:94636:Heusch:C.Disk:Kendrick & Co:898-1270:9/17/85:eg

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING CHEMICAL: CHLORPYRIFOS
 DURBAN MC (EPA REGISTRATION NO. 464-381)

610.120 - PESTICIDE CHEMISTRY

Guideline Citation and Name of Test	Test Substance	Guidelines Status	Are Data Required		Footnote Number
			Yes	No	
<u>Product Identity:</u>					
61-1 - Product Identity and Disclosure of Ingredients	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
61-2 - Description of Beginning Materials and Manufacturing Process	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
61-3 - Discussion of Formation of Impurities	NP	R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<u>Analysis and Certification of Product Ingredients</u>					
62-1 - Preliminary Analysis	NP	CR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1/
62-2 - Certification of Limits	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
62-3 - Analytical Methods to Verify Certified Limit	NP	R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2/
<u>Physical and Chemical Characteristics</u>					
63-2 - Color	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-3 - Physical State	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-4 - Odor	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

EPA REGISTRATION FOOTNOTES:

1/ analysis for impurities needed.
 2/ analytical method for determination of impurities needed.

TABLE 3

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING CHEMICAL: Chlorpyrifos
 DURBAN NC (EPA REGISTRATION NO. 464-381)

5120.120 - PRODUCT CHEMISTRY

Guideline Citation and Name of Test	Test Substance	Guidelines Status	Are Data Required		Footnote Number
			Yes	No	
<u>Physical and Chemical Characteristics (Continued)</u>					
63-7 - Specific Gravity	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-12 - PH	NP	N/A	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-14 - Oxidizing or Reducing Action	NP	CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-15 - Flammability	NP	CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-16 - Explosibility	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-17 - Storage Stability	NP	CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-18 - Viscosity	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-19 - Miscibility	NP	N/R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63-20 - Corrosion Characteristics	NP	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>Other Requirements:</u>					
64-1 - Submittal of samples	NP	CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

CR = Required; CR = Conditionally Required; NP = Manufacturing-use Product
 DATA REQUIREMENT FOOTNOTES:

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